

AN ABSTRACT OF THE THESIS OF

Hartley Bernard Campbell for the Doctor of Education
(Name) (Degree)

in Education presented on July 29, 1970
(Major) (Date)

Title: AN EXAMINATION AND ASSESSMENT OF THE SUTOE
PROGRAM IN OREGON

Redacted for Privacy

Abstract approved: _____
Henry A. Ten Pas

This study is focused primarily on the development and evaluation of the SUTOE (Self Understanding Through Occupational Exploration) program in the State of Oregon. It cites the need for a relevant curriculum for junior high school age youth, and reviews the philosophical basis for development of the SUTOE course.

The author appraised subjective evaluations of the program in its initial years of operation. For the statistical aspects of the study, an Assessment Form of 128 components was developed and used in both a fall and spring administration in 1968-69. Eighth and ninth grade students in 19 experimental and 6 control groups participated.

Each item on the Assessment Form offered a choice of four different responses in which individual students would reflect degrees of knowledge, feelings, attitudes, opinions, or interest on topics relating to self understanding and occupational information. The study

tested for change in responses to individual items, and noted direction of change where it was considerable. An analysis of group means was made by use of a t-test, and a test of the Least Significant Difference.

The research indicated groups of students enrolled in SUTOE programs responded differently to more of the 128 items in a re-test situation than did Control groups. The differences were statistically significant on more items for SUTOE groups, though not on a majority of them. Among the individual experimental groups, 25 percent of the items had significant changes by one or more groups, while fewer than 2 percent of the items in the control groups changed from fall to spring. The total experimental group versus control group did show 67 percent more change for SUTOE in the spring testing.

An Examination and Assessment of
the SUTOE Program in Oregon

by

Hartley Bernard Campbell

A THESIS

submitted to

Oregon State University

in partial fulfillment of
the requirements for the
degree of

Doctor of Education

June 1971

APPROVED

Redacted for Privacy

Professor of Education
In charge of major

Redacted for Privacy

Chairman of the Department of Education

Redacted for Privacy

Dean of Graduate School

Date thesis is presented July 29, 1970

Typed by Cheryl E. Curb for Hartley Bernard Campbell

ACKNOWLEDGEMENTS

Personal acknowledgements are due several persons for their part in making this study a reality. First, I wish to express appreciation to my major professor, Henry A. Ten Pas, Director of the Division of Vocational, Adult and Community College Education, Oregon State University, for his thoughtful consideration and suggestions regarding so many aspects of this study. A warm thank you is also extended to each of my other Committee members: Franklin R. Zeran, Larry Boersma, Russell W. Maddox, and Lester M. Beals, for their questions and encouragement at crucial times.

Special recognition is extended to Leslie L. Adkins and Ronald E. Kaiser, former colleagues of mine who were employees of the State Department of Education, for their personal interest and patience in exploring concepts with me in the developing stages of the SUTOE program. They, along with Glen Weaver's acceptance of the goals, made the total challenge an actualizing experience. Without their contributions, there would have been no reason for a study of this kind.

Encouragement and cooperation came from many sources as SUTOE evolved, and the assessment research ensued, but most of all I owe a debt of gratitude for the patience of my wife, Loreta, and the help of my son, Calvin, and daughter, Hope, in some of the counting chores of this endeavor.

TABLE OF CONTENTS

<u>Chapter</u>		<u>Page</u>
I.	INTRODUCTION	1
	The Central Purposes	1
	The Hypotheses	2
	Scope and Limitations of the Study	2
	The Frame of Reference	3
	The Need for the Study	4
	Definition of Terms	7
II.	REFERRAL TO PERTINENT LITERATURE AND RELATED PROGRAMS	11
	The Plea for Relevant Education	11
	Developmental Guidance and Career Choice	14
	Research in Occupational Choice Readiness	19
	Projects in Other States	21
III.	GROUP VOCATIONAL GUIDANCE AND CAREER EXPLORATION IN OREGON	28
	Introduction	28
	Junior High Work Experience Examples	28
	The <u>SUTOE</u> Program in Oregon	30
	<u>SUTOE</u> Experiences Upon Which to Build	36
	Subjective Evaluations of <u>SUTOE</u>	38
IV.	PROCEDURES IN PREPARING FOR ASSESSMENT	43
	Introduction	43
	Preparation of the Instrument	43
	Identification of Groups	47
	Method of Analysis	50
	Summation	52

<u>Chapter</u>		<u>Page</u>
V.	ANALYSIS OF DATA	54
	Introduction	54
	Differences Within and Among Individual Groups	54
	Total Groups Significant Differences Fall vs. Spring	61
	Significant Differences, Control vs. Experimental	65
VI.	CONCLUSIONS, QUESTIONS, AND RECOMMENDATIONS	69
	Interpretation of Findings	69
	Subjective Judgements Reviewed	71
	Questions of Interest	72
	Need for Further Research	74
	Observations and Recommendations	75
	BIBLIOGRAPHY	77
	APPENDICES	
	A - The <u>SUTOE</u> Assessment Form	85
	B - Suggestions for Administration (fall)	91
	C - Reminders for Administration (spring)	93
	D - Identification of Groups in the Study	95

LIST OF TABLES

<u>Table</u>		<u>Page</u>
I	Items Showing Significant Differences in the Means Between Fall and Spring Administration, t-test	64
II	Significant Differences in the Means Between Control and Experimental Groups in the Fall and Spring, and in the Fall Minus Spring (F-S) Using the t-test with 18 Degrees of Freedom	68

AN EXAMINATION AND ASSESSMENT OF THE SUTOE PROGRAM IN OREGON

I. INTRODUCTION

The Final Report of the Education Improvement Advisory Commission, State of Oregon, 1966, in the section titled "Vocational Education" states:

Group and individual guidance about occupations should begin during the junior high school years to facilitate wise occupational choice by assuring that every youngster becomes familiar with the different types of work that exist. (66, p. 61).

Within this frame of reference the writer developed the SUTOE (Self Understanding Through Occupational Exploration) program, beginning in the fall of 1966. This report delineates what has been developed and assesses its effectiveness.

The Central Purposes

The study examined changes in attitudes, interests, feelings, and knowledge in those students enrolled in SUTOE as compared with those who were not. Specifically, the central purposes of this study were:

1. To conduct a statistical analysis of responses to an assessment form, of groups of students enrolled in the SUTOE program during the second year of operation, and

compare these with responses of groups of students not in the program.

2. To consider whether the data, and subjective judgements made, support the assumptions relative to SUTOE.

The Hypotheses

Three major null hypotheses were examined:

1. There are no significant differences in mean scores among groups of students tested in the fall, whether enrolled in SUTOE or in control groups.
2. There are no greater differences in group mean scores among or within groups in the spring testing than in the fall administration.
3. There are no significant differences between the mean scores of the total control group and the total experimental group in either the fall or spring testing, nor in the fall versus spring testing.

Scope and Limitations of the Study

SUTOE is a two semester course recommended for ninth graders, but adaptable to others. Many of the students enrolled in the program were in grade eight. The course was used during the 1967-68 school year on a pilot basis with approximately 160 students in two

school systems. It expanded to 17 school systems and about 850 students in 1968-69. During 1969-70, it was scheduled to be used in approximately 25 school systems and with about 1500 students.

This study is limited to the State of Oregon in the years 1968-69, in 17 school systems offering SUTOE, and four school systems providing six control groups. All groups in the study were in grade eight or grade nine.

The Frame of Reference

Both E. G. Williamson and Donald E. Super have provided philosophical groundwork for the development of meaningful vocational guidance programs such as SUTOE has attempted.

To be sure, each student needs to be encouraged to pursue self-understanding in his own style of thinking and to make his own choice among alternatives and standards of excellence (89, p. 177).

Concern for vocational development is the monopoly of no type of institution. It is a major responsibility of schools and colleges, for in them pupils and students acquire an orientation to life and to work, in them adolescents prepare to earn a living and to lead a way of life which is in large part determined by the method of earning a living, and from them young adults enter the world of work and launch their careers In short, vocational development is a major concern of society, for it is an essential to both the development of human resources and to technological and economic development (79, p. 309).

Schools. . . . need to develop and carry out educational programs which have as their objective the development of adequate self-concepts in students, the orientation of students in the world of work, the translation of these self-concepts into occupational terms, and the testing of these vocational self-concepts against the realities of occupations. This last does not mean that schools and colleges should necessarily include work experience in their curricula. "Capsule" realities may be used, in the form of courses, activities, testing, and other means of helping the student to try out his abilities and interests for their vocational uses (79, p. 310).

The SUTOE Teacher's Guide stresses that occupational exploration is a valid vehicle for development of self understanding. It is designed to help each student take advantage of available opportunities through which he may ascertain, and succeed in reaching, his occupational goal.

The Need for the Study

The State of Oregon employed the author in the summer of 1966 as a Consultant in Vocational Guidance. Vocational Education and Guidance personnel in the Oregon Board of Education, and at Oregon State University, had identified significant problems in their disciplines. One of the basic neglects was identified at the junior high school level. The writer was assigned the responsibility to develop a program of exploratory experiences that would introduce students of junior high school age to occupational opportunities. The developing phases were successively referred to as Occupational Cruise,

Introduction to Vocations, Vocational Exploration and Self Evaluation, and Self Understanding Through Occupational Exploration.

Extensive ongoing research had been undertaken by personnel in the Vocational Education section of the Department of Education prior to 1966, but more was needed. There was also still a need to formulate specific goals and methods to be used, plus dedication of time and effort to the task. Participation by the writer in the August, 1966, National Seminar on Vocational Guidance at Marquette, Michigan (33), provided the spark that led to intensive work on the assignment. The Seminar was jointly sponsored by the American Personnel and Guidance Association and the American Vocational Association, and funded by the U.S. Office of Education. Authorities in vocational education and guidance from throughout the nation gave leadership and direction to the conference, and to followup activities.

As in-depth investigation was conducted, it became more apparent that if students were going to experience meaningful learning about the world of work they would need to have a greater understanding and acceptance of themselves as individuals. The decision was made to propose an approach to the problem of providing exploratory experiences for junior high school students that was unique in many ways, but that would draw on theories and experiences of many others.

General assumptions were formulated as several individuals worked together to develop a pilot program for students of junior high

school age. The assumptions were:

1. All should have a look at the world of work.
2. All should develop understanding of self, a self concept.
3. All should have experiences in decision making, and in accepting responsibility for their own decisions.

Subsequently, other basic assumptions were added (see p. 35).

Like the concept that career choice is a developmental process, the SUTOE Teacher's Guide is ever evolving. If it is to be viable and meaningful as a tool for learning which incorporates occupational education, general education, and guidance programs, it must be flexible and subject to improvement. Because of these, and many more reasons, it was essential that the SUTOE program in Oregon be examined and appraised.

The original Teacher's Guide was published in the spring of 1967, by the Department of Education, following recommendations of an advisory committee. Members of the committee consisted of administrators, vocational educators, and guidance personnel from public secondary schools, plus Department of Education and Department of Employment Service staff members.

Three summer workshops for SUTOE instructors have been conducted. The original Teacher's Guide was extensively revised in the spring of 1969, and republished with Vocational Education funds, by the Oregon Board of Education in June 1969. The revision committee

consisted primarily of those most acquainted with the philosophy of SUTOE, and/or with experience teaching the course.

The investigator continued through June, 1969, to have a major responsibility in publicizing the program and coordinating the development of it, as well as consulting with those in the school systems who work directly with SUTOE. It has gained acceptance as a relevant vehicle for learning about careers and self. There has been ongoing evaluation, much of it of a subjective nature, but more research was needed.

Definition of Terms

Explanations presented here are meant to clarify some of the most used reference points.

Assessment Form -- The instrument used in this study for collecting the data for statistical analysis. It consisted of 128 components in questionnaire form. Each component provided four choices for denoting the degree of agreement with the statement. It dealt with attitudes, feelings, opinions, interests and knowledge. See Appendix A.

Career Development -- Moving from initial early thoughts about work to a point of anticipation in planning one's future.

Developmental Guidance -- The view that career choice is a life-long process and the role of guidance is to help the individual implement a healthy self concept.

D.F. -- The Degrees of Freedom allowed in treating the group means (averages) with the t-test.

DPT -- Data - People - Things, functional aspects of work as defined in the Dictionary of Occupational Titles, Third Edition, (DOT), and used as a recommended aid for exploration in the SUTOE program.

F - S -- Fall versus Spring testing in this study.

Life Style -- The sum total of how one lives as influenced by work, work relationships, other factors in his environment, native ability, and historical circumstances.

LSD -- The statistical test of Least Significant Difference to determine the spread of variations in mean scores.

Occupational Exploration -- A study of the world of work in a broader sense than the usual vocational or job research. It consists of examination of many possible careers, and the life style related to the work being considered. Exploration is via individual research, group discussion, listening to specialists in various occupations, field trips to observe workers at their tasks, film and filmstrip viewing, role playing and simulated activities related to earning a living. It is a very important aspect of the SUTOE program. It does not ordinarily include "hands-on" work experience as such.

OVIS -- The Ohio Vocational Interest Survey, developed by a group of Ohio Educators, and normed nationwide in 1968-69. SUTOE schools in northwest Oregon were in the norming population.

Pertinent Literature -- That which is directed to the topic of vocational guidance and decision making and referred to in this study.

Self Understanding -- The concept that each individual is capable of exploring and realizing his own uniqueness, via self appraisal and assessment.

Statistical or Significant Change -- As measured by the t-test or the LSD test, indicated by .05 or .01 level of significance.

SUTOE -- The Self Understanding Through Occupational Exploration program initiated in the fall of 1967 for ninth, or eighth, grade students. It is recommended as a two-semester course.

t-test -- The statistical analysis of the means of groups to test the significant differences. In this study, the following t-test was used to compare groups of students, using appropriate degrees of freedom, as shown in Tables I and II.

$$t = \frac{\bar{X} - \bar{Y}}{\sqrt{\frac{\sum D^2 - \frac{(\sum D)^2}{N}}{N(N-1)}}$$

D = difference score between each X and Y pair.

N = number of pairs of scores

Vocational Education -- As used in this report is referring to preparation for earning a living.

Vocational Guidance -- Individual and group processes designed to enhance individual personal vocational or career choice and attainment.

Work Experience (Junior High) -- Programs where ninth graders are provided with limited on-the-job work experiences of brief duration in the community, for no pay, and in connection with planned seminars or other in-class work.

II. REFERRAL TO PERTINENT LITERATURE AND RELATED PROGRAMS

The Plea for Relevant Education

Authorities provide ample evidence on every hand to support the plea for a curriculum that will help youth prepare for the world of work so that, prior to actual vocational education, exploratory experiences will help them to make realistic educational choices for themselves. Grant Venn, editor of Man, Education and Work (86), has made many presentations on the subject. Among his statements are:

Comprehensive education is going to have to provide new programs, new courses, new flexibility, so that every youngster has a chance to learn . . . It seems to me it is a matter of acquainting our youngsters with the broad areas of occupations that are available and opening their horizons and their understanding to the myriad of possibilities that are available to them . . . We must get flexibility in our educational programming. (87)

The American Association of School Administrators, in its 1966 publication Imperatives in Education, Imperative 3, "To Prepare People for the World of Work," has much to say on this topic, some of which follows.

"...it is imperative that the school be organized to help the worker make successful career changes and to assist young people in preparing for the world of work (44, p. 22).

Imperative 3 goes on to emphasize the dignity of all socially useful labor, and that attitude development toward vocational education

should begin early and be continued.

This all-important end cannot and must not be left to chance or be merely an incidental by-product of the education process. The school must not only see this as a major purpose, it must be willing to do something about it (44, p. 33).

Marvin Feldman (28 and 29), of the Ford Foundation, has urged that more relevant curriculums be provided students.

A wide variety of exploratory occupational education programs could be introduced in the junior high schools. Such programs might well replace more limited current industrial arts and home-economics subjects which are offered to most children in junior high school ... The work world is a valid component of academic content for all children ... (29, p. 16 and 17).

At the 1966 National Seminar on Vocational Guidance, Hoyt, past president of the American Personnel and Guidance Association, told participants that:

Students need to learn to make decisions in a meaningful, realistic, and intelligent manner about the critical 2 or 3 years beyond high school. The necessity of long range decisions (choices) 10 or 20 years ahead, is questionable ... If we help them make intelligent short-term decisions, they should then be armed with the ability to keep on making intelligent decisions over a longer time span (33, p. 116).

The 1968 Amendments to the Vocational Education Act of 1963 provide for vocational guidance that aids all students in becoming familiar with the broad range of occupations through exploratory experiences that are meaningful.

Draper, in the National Association of Secondary School Principals Bulletin #2, states:

At the very least, the junior high school needs to be able to offer broad participation in exploratory pre-vocational experiences as well as such "practical" courses as industrial arts and home economics. Perhaps even more striking measures will be required. Though this may go against the traditional grain, the area seems to be one for bold and flexible adaptation (24, p. 110).

The Massachusetts Institute of Technology Study of Occupational, Vocational and Technical Education, one of many cited by Draper, emphasizes the need for experimental and investigative experiences for students as a method of involvement.

Tennyson et al., (81) stress that:

Where an individual has the responsibility and freedom for making vocational decisions -- as is essential in the American way of life -- he needs information to aid him in his vocational development ... Today's children have neither the means to comprehend the intricate relationships of occupational life nor the knowledge of procedures through which adequate information may be secured (81, p. 9).

The educational challenge is clear. Most certainly the school does not and cannot make occupational choices for an individual student, but it can and should encourage him to see the necessity and to accept the responsibility for planning his future (81, p. 10).

These, then, are samples to support the assertion that the challenge faces schools now. Opportunities must be provided for student self appraisal with broad occupational exploratory experiences for all students.

Developmental Guidance and Career Choice

Vocational guidance, in fact all guidance and education today, must deal with the whole person. One's career choice is an implementation of his self concept. It is indicative of his life style, and the result of his choosing from among the alternatives available. As Blauner has said:

The industry a man works in is fateful because the conditions of work and existence in various industrial environments are quite different . . . the work he performs eight hours a day affects the meaning which work has for him (10, p. 166).

Vroom, in Work and Motivation, cited in Career Information Service expressed limiting factors of choice as follows:

Clearly a person's choice among occupations is limited to those about which he knows something. If a person has no concept of what an ichthyologist or an epidemiologist is or does, it can have no effect on his vocational decisions. For most people the range of possible alternatives from which to choose is greatly limited by the restricted range of information which they have concerning the world of work (18, p. 6).

It is not realistic to be concerned only with test abilities, aptitudes, interests, and achievement in relation to perceived job requirements. Education must increasingly recognize and deal with the roles of attitudes, motivation, social pressures and self concepts in career development (18, p. 10).

Miller and Form have illustrated graphically the concept that native ability, historical circumstance and acquired personality traits

make up the equilibrium of forces that determine occupational level (59, p. 585).

Another dimension is offered in the introduction to a recently published book by Neff, in the statement: "A human being is not born with the ability to work any more than he is born with the ability to make a successful marriage," (62).

Researchers in education have become deeply involved with this problem. From the many sources of expertise that could be used, seven are presented briefly here as major supports for the SUTOE philosophy. They synthesize logically, though each may be credited with operating from a somewhat different original frame of reference. Elaboration of their views can be readily found in Vocational Guidance and Career Development - Selected Readings (68, p. 91). A discussion of these theories may also be found in several other places, including the Personnel and Guidance Journal in an article titled, "Do We Have a Theory of Vocational Choice?" (17, p. 335). The vocational development theories of these seven, in essence, seem to be:

1. Ginzberg - Occupational choice is a process, generally irreversible, and compromise is an important part of every choice. Occupational decisions come in three stages: fantasy, tentative choice and realistic choice.

2. Super - The stages of occupational choice are: (a) fantasy, tentative and realistic exploration; then (b) trial and stable phases of the establishment stage can be guided by facilitating choice and by reality testing, implementing a self-concept.
3. Roe - There is important relationship between early experience and ultimate vocational selection of the individual.
4. Tiedeman - Vocational development is maturational decision making, coming in various stages: exploration, crystallization, choice and specification.
5. Holland - At the time of his vocational choice the individual is the product of the interaction of his heredity and environment. Inadequate self-knowledge leads to inadequate choice. Adequacy of choice is partly a function of age and experience. Occupational knowledge positively correlates with self-knowledge.
6. Blau et al. - Occupational choice is a developmental process over many years with many crossroads where decisive action takes place. Social structure affects occupational choice and it is a process of compromise.

7. Bordin et al. - Career development moves from infantile groping to fulfill needs, to mature approaches toward an occupation.

If these concepts are tenable, then we can concur with Willis Dugan, Executive Director of the American Personnel and Guidance Association, when he says:

There is no conflict between developmental and guidance values when the teacher concerns himself with the career objective along with the development of subject-matter skills, attitudes, and abilities . . . This teacher role has significant implications for encouragement of self-discovery, self-acceptance, attitude development, motivation, personal planning, and career development . . . This opportunity to examine and to evaluate appropriate career alternatives serves to implement each person's right to self-determination (25, p. 15).

Still, the issues have not all been settled. Roeber, in a 1965 presentation at the APGA Convention, illustrated the gulf between theory and practice by saying:

Modern theorists have stressed that career development is a life-long process but practitioners leave the impression that life must begin around the ages of fourteen to sixteen years when decisions about curriculum, school leaving, and work are necessary (71, p. 88).

The belief that all students need vocational guidance finds support in the series of articles published in the American Vocational Journal, titled, "Vocational Education Curriculum, a Thorough Coverage" (49), especially where Law states succinctly:

1. Career guidance and orientation is needed by everyone.
2. Vocational guidance needs a regular place in the school curriculum.
3. There can be no satisfactory program of career guidance without vocational education (49, p. 27).

There is no dearth of materials to support the view that schools should more adequately meet the needs of students. It is essential that identified career development concepts be implemented.

Scates (75), in a January 1968 USOE sponsored conference, reported that more than 200 projects dealing with career development and related vocational guidance and counseling problems had been undertaken in the last ten years. She stressed that the focus was on knowledge needed by an individual to live and participate in the work force, and most students are not getting enough information on which to base rational decisions. Scates sums up the thinking on the subject by delineating three major segments of total vocational guidance:

1. The development of curriculum units;
2. The development of a means for individual exploration;
3. The facilitation of counseling sessions (75, p. 12).

Many innovative and experimental projects and instruments in career development are analyzed and reviewed in the professional journals and via the ERIC System. Some of the more popular or better known ones are referred to specifically in the December 1968 American Vocational Journal (78, p. 19). The June 1969 Vocational Guidance Quarterly also presents abstracts of several of them (67, p. 255).

Research in Occupational Choice Readiness

Krasnow (48) found in his research that ninth grade boys knew more about specific preferred jobs than about the world of work in general. He concluded that this is contradictory to theories of vocational development which say pre-vocational choices are based on recognition of many alternatives. Perhaps two of his findings would be the most startling to realize, and would be worthy of future research. The study revealed that ninth grade boys choosing a vocational curriculum had less knowledge about the world of work and were less informed about general occupational information than those who chose the academic curriculum. They also had less information about a preferred occupation than boys choosing the academic curriculum (48, p. 278).

As a result of Krasnow's confirming that students with the fewest alternatives were making the most crucial early decisions he urged earlier use of occupational information services, more consistently, and with experiences in decision-making. He also suggested delaying curriculum choices until more vocational background and maturity was achieved. Lack of occupational and self-information must be remedied first, he concluded.

In another study (13), it was found that most non-college bound youth take the first job available and stay with it as long as possible.

Under such circumstances, it is urged that more vocational guidance be available while they are still in school. The youth must have help that will motivate toward self understanding for individual needs. The study indicated some try-outs must be vicariously experienced, but not on a hit or miss basis.

Several investigators have found some evidence that acceptable tentative occupational choices could be made as early as grade eight. For example, McDaniels (53) found many eighth graders were more advanced than tenth graders in their vocational development with less need to delay choice. He refers to a study in California by Barbara Gunn, which detected vocational readiness by grades 7, 8, and 9. McDaniels sees the need for realistic efforts to develop vocational readiness at least by junior high school. His article reviews several of the prominent studies regarding whether age 14 is too young to choose.

Flores and Olsen (30) found in their study that the eighth grade boys level of occupational aspiration was more stable and realistic than older boys in grade 11 or 12. They suggest much needs to be done in schools to help youth become aware of their potential.

Jones (45), in his analysis of occupational plans of grades 8, 9, 10, 11 and 12 students, as indicated in the OVIS norming group of 5000 students in Oregon, found minimal differences in first or second choice of occupational goals among the five grades tested. He

concluded eighth or ninth graders are as ready for meaningful occupational information and learning experiences as are the older students. His analysis examined the choices of over 4000 students in Clatsop, Tillamook and Columbia Counties, Oregon.

English (26), Rubinfeld and Hoppock (72), and Super are among others who have reported on research in readiness for vocational decisions. What, then, of classroom efforts to implement programs of vocational guidance?

Projects in Other States

The states of New Jersey (64) and North Carolina (6) have each sponsored courses titled "Introduction to Vocations" for ninth grade level. Their approaches have tended to be adaptations of industrial arts activities and other hands-on experiences, with an industrial orientation. Several other states have been involved in aspects of career development concepts closely allied with literature cited in the preceding pages. An example is the "Four Worlds: An Approach to Occupational Guidance" (51), in Lansing, Michigan. There, a one-semester course is required for all ninth graders, the rationale being "... if students are even to begin making meaningful vocational investigations they must first become more aware of the almost infinite possibilities that are open to them," (51, p. 641).

Cedar Falls, Iowa, has an eighth grade group guidance unit which has four avowed purposes. They are to get students to: define life goals, broaden their awareness of career resources, relate elective courses to future plans, and improve research and creative writing skills (26, p. 138). More than one-half of the students surveyed later felt their eventual career choice would be more satisfying as a result of the exploratory experiences (26, p. 140).

A recent survey in Wisconsin by Mezzano (57) found that 75 percent of the high schools responding offered occupations units or courses in some manner, with no fixed grade level, and with very little structure. Only seven percent teach occupations as a course of one-semester or more. Fifty percent of those involved in teaching the units or courses had no preparation in how to teach occupations. The question was raised:

And what of the many youngsters who are receiving the information in a haphazard or begrudging manner because the teachers are untrained and unhappy? Perhaps it is time to think about setting some certification standards for teachers of occupations (57, p. 277).

Perhaps one of the more outstanding projects outside Oregon is the Ohio developed program titled "Development of a System of Vocational Exploration through the Use of the Dictionary of Occupational Titles (Third Edition) and the Ohio Vocational Interest Survey" (67, p. 255). This program is described briefly in the Vocational Guidance Quarterly (22, p. 242), and in correspondence and personal

discussion between David Winefordner, one of the co-authors, and this writer. In addition, Mr. Winefordner has been involved in developing the concepts in several other states, including Georgia and Florida. He was a team chairman of an August 1968 conference in Carrollton, Georgia, which produced a draft copy (90) of suggested approaches to exploratory vocational guidance. Copies were made available to the SUTOE teachers in Oregon when he was in Tillamook October 11, 1968, to serve as a resource person for the statewide SUTOE meeting. Mr. Winefordner came in the dual role of consultant regarding the general topic and as a representative of Harcourt, Brace & World, to survey the feasibility of the SUTOE schools in Oregon serving as part of the nationwide norming group for OVIS.¹

The authors of OVIS (22) made the assumption, based on extensive research, that data, people, and things are the basic elements of the world of work, though not mutually independent. They pointed out that the world of work has psychological or worker-oriented definitions. This is why their emphasis is placed on the last three digits of the DOT code rather than the first three which classifies by industrial labels.

¹ The decision was affirmative, and Mr. Winefordner was in Oregon again in May, 1969, to lead a workshop for interpretation of the OVIS findings.

Coincidentally, and without prior realization, this general view was being developed somewhat intuitively in the evolving of the SUTOE program in Oregon, where four of the units are centered specifically around the DOT concepts of data, people, and things, worker functions. The investigator had also been in correspondence with David Pritchard, Specialist in Vocational Guidance Program Services at the USOE, regarding these concepts.² In his letter, Pritchard had encouraged continued centering of the major part of the evolving course around the data, people, things, concepts. . . He did caution that more research was still needed regarding empirical validation of some of the materials in the DOT.

It was gratifying to discover this approach was developing elsewhere and on sound research principles, though the Ohio group has used a somewhat different method of implementing the concepts in schools. In the description of their model, it says:

The career development concept has been divided into such specific components as self and relationships with others, the world of work, education and training, economic education, employability skills, and the decision-making process (90, p. 4).

² Letter to Campbell, dated May 2, 1967

Knowledge objectives, related behavioral outcomes, and sample activities are listed for the benefit of users. A major point of difference between their approach and the Oregon program has been their recommendation that particular objectives can be handled in each of grades 7, 8, and 9, while in SUTOE they are incorporated in a sequential separately identifiable course. The emphasis is at the junior high level in both projects, and it is recognized that career exploration is a developmental process extending from early life to adult years.

The state of Oklahoma has recently published an extensive Guide (65) which is filled with ideas for initiating creativity on the part of teachers and counselors, at all grade levels, toward implementing vocational guidance and career exploration programs for students. The project was an outgrowth of the recognition that current school programs were inadequate, and ensuing conferences resulted in what is hoped will more adequately meet the needs of students. The introduction to their Guide reads:

While it is not the purpose of this guide to encourage children to make premature decisions concerning career choice, it is imperative that the child have an opportunity over a long period of time to develop a reservoir of information, attitudes, and experiences which will serve as a substantial base when these kinds of decisions are made (65, p. vi).

In West Carrollton, Ohio, the junior high school has a full year required ninth grade course called "Vocational Economics" (32). The three major purposes in that program include helping the student know himself better, introducing him to vocational information and bringing background information of other cultures. In a letter³ from the Coordinator of Guidance, he stated they do not use a textbook or guide as such, but they do use a variety of materials in a loosely planned sequence; e. g., tests, individual booklets, letters of application, interviews, etc. Emphasis is on how to locate and use occupational material, not a vocational decision. They feel there has been active cooperation and considerable success with the program since its initiation in 1962.

The Willowbrook High School at Villa Park, Illinois, has a unique method for bringing occupational information to students via computers (35). The program is based on Roe's (70) two-dimensional system for classifying occupations. Though the project is to encourage individual exploration of information by students, they first become acquainted with the frame of reference in a vocational unit in sophomore English classes. The experiment appears to have value as an implementer of the counseling services more than as a facilitator of relevant curriculums, for all students.

³ Letter to Campbell dated August 16, 1966

Many other programs, including the VIEW project in San Diego (67, p. 262), make their thrust in provisions for individual encounters with occupational information. They serve a useful purpose but appear to sometimes neglect giving opportunities to students for learning from each other, especially in the important areas of understanding self in relation to others and to expectations of the culture.

III. GROUP VOCATIONAL GUIDANCE AND CAREER EXPLORATION IN OREGON

Introduction

Some Oregon schools offer extensive units in career exploration, and a few offer course credit in Vocations. The trend toward establishing courses of study relating to vocational exploration is increasing, though they operate under a variety of names and approaches. In many ways, developments parallel those found by Mezzano (57) in the Wisconsin study cited earlier.

Of late, with the Oregon Board of Education emphasis on the Occupational Cluster Concepts,⁴ some junior high schools are beginning to develop introductory units for various clusters. It appears to be too early to make any value judgements about the success of this latter approach, as it is just getting started.

Junior High Work Experience Examples

Over the last few years many junior high schools in Oregon have made attempts to bolster their programs to provide experiences relevant to the world of work. Examples of such schools can be found in the Corvallis, Oregon, system. Ninth grade students (36) in

⁴ Commonalities of skills and knowledge needed for entry level jobs in a broad field.

limited numbers have been assigned under closely supervised conditions, to work experiences on a rotating basis. Students participating in these programs have been very carefully screened after being recommended by staff members and/or indicating interest. The project was initiated originally with the intent of giving the system more holding power with potential drop-outs. Corvallis initiated this general approach in Western View Junior High School, and it has spread to their other junior high schools.

In their program students usually are excused from regular classes for two or three periods per day while "on the job" in the local community business or other setting. This specialized experience has been set up in the past to last approximately nine weeks, during which time the student rotates to three different jobs (or employers) for about three weeks each. At the end of the time the students return to regular classes, and a new group is involved in the experiences.

Judson Junior High School in Salem, Oregon, has adapted several aspects of the Corvallis program, as have other scattered schools. The Judson project, though developed separately, still offers work experience and exploration to limited numbers of its students, and also relies heavily on SUTOE Guide materials and SUTOE trained or experienced teachers to implement the program.

Hopefully, students who have been involved in the above described projects have more realistic knowledge of personal interests and aptitudes, and keener understanding of the expectations of employers. It has been anticipated that they would reflect changes in attitude that would make them more acceptable students, to the schools as well as to themselves. Subjective data of which this writer is aware indicates this is plausible. The question arises: If this approach meets the needs of some, what can be done for the rest who are just as needy, though perhaps not so noticeable?

The SUTOE Program in Oregon

The adequacy of any tentative occupational decision is limited when a school fails to make relevant information available which will acquaint all youth with the immense diversity of occupational possibilities. Parallel to this, it must be recalled that the junior high age person is in a transition stage. His choices are not concrete; but unreliability is not instability, and the picture he has of himself changes. With this dual realization in mind, the program described below has evolved.

SUTOE provides a broadscale, classroom approach for assisting students with educational and career planning, via self appraisal and examination of jobs in relation to the data-people-things conceptual framework of the DOT. Occupational and general education, and

guidance programs are linked together in this effort to enable students to take greater advantage of available opportunities in ascertaining and reaching career goals. The course consists of ten units, each of which has several identified behavioral objectives. A wide variety of in-class and out-of-class suggestions for implementation are offered under each objective.⁵ It is not offered as a panacea for all, but as a logical approach to relevant career education for schools who are interested in improved activities and processes for students' learning environments.

SUTOE has been designed to aid Oregon school districts in bolstering their vocational guidance programs by attacking the problem on a broader and more comprehensive scale than individual counseling or isolated, piecemeal units permit. Its classroom approach, at a strategic grade level with respect to educational planning needed to reach occupational goals, is meant to enable more students to benefit, and to enhance the counseling process. As a vital segment of an on-going guidance and vocational program in the schools, it can play a major role in helping meet students' needs.

The intent is to provide a frame of reference for students whereby they can explore many possible alternatives, rather than to imply

⁵ Adapted from a dittoed general information sheet prepared by the author.

there are any quick or easy solutions to problems of decision-making. With the extensive documentation of the need for a course in occupational planning in the general education curriculum of schools it is appropriate that a guideline be used. A feet on the ground, eyes on the stars approach has been attempted in SUTOE. As has been suggested by one source (55) students should be shown a view of what there is to see such as they might attain by going to the top of Mt. Constitution in the San Juan Islands of Puget Sound where, through the fog or mist, they can see dimly what is before them. The view might be depressing to some, and it might be inspiring to others, but with greater exploration it will be rewarding.

Through the course, students have opportunity to consider many more alternatives than they hitherto knew existed. Insight regarding their own interests, aptitudes, attitudes, achievements, goals, and acceptance should be increased as a result of the participation in the classes. They have opportunities to examine some of these in depth, and to consider the possible alternatives, as well as learn to make decisions for which they can accept responsibility. It does not make experts in careers, or even by itself prepare students to step into beginning level jobs, but it should broaden their horizons and give them insight for planning their goals with fewer frustrations or dead-end starts.

SUTOE is designed to provide a frame of reference in which students of junior high school age may examine their developing self image and life style. Next to communications skills per se, surely vocational and related educational planning decisions, along with those related to life-mate choices and leisure time use, are most needed. It is impossible to consider these intelligently without the individual having knowledge of his present environment, the realistic potentials available, and of himself.

As Small (77) has suggested, to assist youth to understand themselves may be the chief method of exploring their own uniqueness. He feels vocational readiness cannot be attained without intelligent and objective information about oneself. Specific information is often needed in a setting where it can be examined objectively with the aid of others. Small stressed that occupational information should not be planned or designed to encourage an early choice of an occupation, and he reminded readers that the more pertinent and usable information made available to students which they can digest and add to their knowledge and self understanding in relation to the world of work, the less the counselor and other school officials will have to make decisions for them. These are among the aims of the course called SUTOE.

Methods of implementing the philosophy of the program may be illustrated by considering the unit titles, and the basic assumptions,

as stated in the Teacher's Guide. The 1967 draft consisted of ten basic units, plus many appendices containing material that could be used in implementation of the concepts. Unit titles were: (14, p. 1)

- I. Pupil Assessment and Orientation to the Course
- II. Self Understanding and Self Appraisal
- III. Interrelationship of School with Occupational Planning
- IV. The Individual's Role in the Economic System
- V. Preparing Students for In-Depth Career Studies, Introduction to Units VI, VII, and VIII
- VI. Study of Jobs Primarily Involving Work with Data
- VII. Study of Jobs Primarily Involving Work with People
- VIII. Study of Jobs Primarily Involving Work with Things
- IX. Evaluating Your Experiences and Planning Ahead
- X. Final Course Evaluation and Recommendations

The revision committee of 1969 made changes in content and approaches to the course (15, p. v), as well as some changes in the unit titles. The essence of the changes was a tightening of the structure which provides more direction for the teacher and class. There is more choice for individual activities and pursuits. Individual and group guidance aspects have been strengthened while occupational exploratory experiences have become more easily identifiable.⁶

In the 1967 Guide, many general and specific objectives for the course were postulated in the introductory section. They were also incorporated into some of the forms for suggested use in the Appendix, and in some instances listed as anticipated outcomes in various unit activities. With the tightening of the structure, based

⁶ Adapted from the Acknowledgements of the 1969 Draft (15).

on experiences in the schools involved, most of these objectives are still considered basic, but in the main they are more clearly delineated in the pertinent unit objectives and suggested activities for same. As a result, the 1969 Guide has included a list of eight Underlying Basic Assumptions to illustrate the philosophy of SUTOE. They are: (15, p. xvii)

1. All students should have an opportunity to explore the broad total of the world of work.
2. All students should have opportunity to develop a self-concept.
3. All students should have experiences in meaningful decision making, and in accepting responsibility for their own decisions.
4. The junior high school years are a time of high potential for developing an awareness of relevant factors to be considered in decision making.
5. Career choice and its implementation is a developmental process.
6. A challenging experience-centered course that stimulates creative individualism is valid for junior high age students in that they become more aware of both strengths and weaknesses, and reflect more positive interests.
7. A program that provides opportunity for acquiring self understanding and knowledge of the world of work, in combination, will contribute much toward helping youth prepare for their place in a complex socio-economic world of reality.
8. More adequate educational goals and tentative career choices may be established by students, as a result of the experiences provided through an organized classroom approach.

SUTOE Experiences Upon Which to Build

Both the Klamath Falls and Coos Bay systems, chosen as pilot schools, had two teachers enrolled in the first workshop conducted on the Oregon College of Education campus in June 1967. At that time they had opportunity to become acquainted with the philosophy and goals of the SUTOE program, and to prepare meaningful lesson plans with the aid of the Guide. They returned to their schools ready to implement.

Mazama Ninth Grade Building in Klamath Falls enrolled four sections, totaling about 90 students the first year, out of approximately 600 ninth graders. In the Coos Bay system, Michigan Avenue School had two sections, about 52 students enrolled, and Marshfield Senior High School had one section which consisted of 17 students enrolled in SUTOE, eighth and ninth grades, respectively. After the first year, both systems decided to expand their enrollments modestly, based on experiences to that time.

The cautious expansion of the program in the original two school systems, plus the decision of 16 other systems to launch into the SUTOE approach in the fall of 1968, established a base from which a program could be built and improved. The June 1968 Workshop for SUTOE, held on the Oregon State University campus, had 24 enrollees. Clatsop, Columbia and Tillamook Counties Administrators, under the

leadership of the Clatsop IED Superintendent, Richard Knotts, made the decision to involve 13 staff members in the two-week workshop. Others attended from scattered areas of the state.

SUTOE teachers have met together in the fall and spring each year, in all-day meetings to exchange ideas and concerns about problems and progress. They have been joined in these meetings by the writer. In the fall meetings there has been a tendency to show more puzzlement and groping, and by spring there has been a feeling of accomplishment for a worthwhile cause, and enthusiasm to include more schools and students in the on-going program. Thus, in June 1969, the SUTOE Workshop at OSU had 22 new enrollees, most of whom became involved in implementing the program in their local schools in 1969-70. Four of the enrollees were from Alaska.

Experience has shown that SUTOE does require extra time and effort, and without a textbook or workbooks, some people do not feel comfortable with the responsibility. Likewise, where a specific effort has been made to find qualified teachers from among those with extensive work experience outside of school, it has sometimes led to situations where the teacher does most of the planning and decision making instead of having extensive involvement of the students. It is often much easier and quicker for one who has the answers to give them.

As the course has evolved, it has become more apparent that it does take a unique person to find success as a SUTOE teacher.

Dedication to the belief that a teacher is a resource person for students, rather than a teller of facts, is essential, according to the views expressed in several meetings by many of those involved in the program. The teacher must be competent to use group processes in the classroom. Summer workshops give some direction in this goal, as they do to many other aspects of the program. The acceptance and enthusiasm of the school administration and other staff members is needed if SUTOE is to be viable.

Subjective Evaluations of SUTOE

At the end of the first year of operation, the two pilot school systems submitted evaluation reports to the State Department of Education (76 and 80). Their conclusions and recommendations, in essence, included the following. The program should be expanded, improved through statewide conferences, and rewritten at a more meaningful level. More continuity is needed in the program, as is more care in the selection of instructors. The program and its principles are endorsed enthusiastically by labor, business and industry in the community. Resource people and field trips offer variety, motivation and successful experiences for the students. More effective means are needed for exchanging information among

SUTOE programs.

The program was judged to be one effective way of acquainting students with the vocational program of the school district, and the relationship to their personal development. It was also considered an effective group guidance program in furnishing occupational and educational information to students on a general basis. Parent participation and interest was rewarding where it was actively sought. At the end of the first year of operation, the pilot systems urged that the SUTOE program become a recommended course in the total structure of the occupational education pattern for the state of Oregon.

While the preceding comments were gathered primarily from reports filed in 1968, they are representative of the feeling of most who worked with the program the following school year. This was determined in telephone calls, correspondence, observation, and meetings during the year. The plans for continued evaluation and rewriting of the Guide resulted from the obvious need. Each teacher of SUTOE wants to be, and should be, free to work with the program in his or her best professional way, but each must have official encouragement and a Guide that will give the program relevance from which to innovate.

Most of those who visited SUTOE classes over the first two years were impressed by what they observed, at least as far as the potential was concerned. Though, not in every case did they feel

each hour was being utilized to its fullest. Visitors liked the concepts, and the relative freedom to be that was found in most of the classes. Occasionally they wondered if it was not a lot like earlier vocational orientation classes. Most who saw the similarity also saw more challenge and more opportunity for significant learning by students.

David Winefordner, referred to earlier, said that SUTOE was the most complete program he had yet seen, and he has traveled throughout the nation visiting and assessing vocational guidance projects. After he examined an initial copy of the 1969 Draft, he commented that it was still better organized and more complete. He liked particularly the sense of dedication and enthusiasm that he witnessed among the teachers in his two visits to Oregon in connection with the OVIS program.

In April 1969, Wah Jim Lee, Staff Specialist in Guidance from the Department of Education in Hawaii, spent two days visiting SUTOE classes in three schools in Clatsop County. He observed a variety of approaches and activities, including playing of educational games, all of which portrayed degrees of understanding of self and occupational roles. He indicated much pleasure at seeing the enthusiasm of students participating in the program, and was impressed by its unique features. In a later letter, Mr. Lee said he got more from his Oregon visit than from attending a professional convention just previously. He had been seeking ideas and materials that could be

used in group guidance prevocational instruction programs in his state. His letter said, "I don't think you have done enough to toot your own horn about your program so that others will know about it."⁷ In a separate letter sent to the Superintendent of Public Instruction in Salem, Mr. Lee told of his visit and said:

I was very impressed with what I saw and how relevant the program was to the needs and interests of the students... We have felt that the conduct of such activities through homerooms, special activities, and units of instruction in subject areas have not proven their worth, and have not been sequential and systematic. Therefore, we have looked with interest upon Oregon's SUTOE program as a possible model for the development of such a course to meet local needs.

Perry "Pete" Jones, Vocational Coordinator for Clatsop-Tillamook Vocational Education said in a letter to the State Superintendent, "We feel that the SUTOE program will have far reaching influence on curriculum changes that will undoubtedly take place in our schools in the future."⁸ He has found the response from educators, students and the community to be overwhelmingly enthusiastic.

Esther Matthews, University of Oregon Counselor Educator with a wide background in vocational guidance has given unqualified support to the concepts of SUTOE. She also served as a chief resource person for the first two Workshops. Many others who are

⁷ Letters dated April 23, 1969

⁸ Letter dated May 19, 1969

knowledgeable in the field have examined the concepts and/or visited the classes and have been pleased with their findings. To end this chapter, it seems appropriate to quote Dr. Matthews from a presentation made in the summer of 1968 at Central Oregon Community College. She was summing up regarding the career development concepts of Roe, Super, and Tiedeman. It was also illustrative of the approach she used in the SUTOE Workshops.

No one can really learn how to make decisions by hearing about adults making decisions.

"... we will find that reasonable kinds of occupational choices will be inevitable in a truly developmental school setting where every aspect of the educational process has been insightfully directed toward the strengthening of the self concept of every student and every staff member. It would be impossible for acute anxiety to develop over the "right", the "ultimate", the "immediate" vocational choice. Choices would rarely be seen as irrevocable. The need for occupational knowledge and part-time work experience would be a normal development of responsible, personal growth. Occupational development over the life span would be seen as the natural order of career evolution (56, p. 10).

Let us now examine the design of the statistical aspects of this study.

IV. PROCEDURES IN PREPARING FOR ASSESSMENT

Introduction

This study assesses changes in those who have been in the SUTOE experiences as compared to those who have not. It recognizes there are many factors outside the experiences of the program which may affect attitudes, feelings, interests, and knowledge, in the field of decision making and tentative occupational choice. However, the study focused on these factors in order to add to subjective judgments about the program. It included the following major tasks:

1. The identification of the groups included in the study
2. The construction of the instrument used in the study
3. The application of the treatments to the selected groups
4. The collection and compilation of the data
5. The statistical analysis of the collected data to determine if differences exist among the groups being studied and/or between fall and spring administration
6. The formulation of implications for guidance and curriculum planning activities in junior high school programs

Preparation of the Instrument

Prior to preparation of the Assessment Form, several interest, aptitude, and attitude instruments were examined in order to find one

that would be able to do the task desired. It was impossible to find any one instrument that had sufficient research, availability, and pertinence to the SUTOE program, to use in the study. The OVIS might have been of most use because of its data-people-things conceptual framework, but it was still in the norming stage. Several other instruments no doubt have validity for their purposes, but they did not focus on SUTOE goals and experiences. After consultation with colleagues, the decision was made to go ahead with formulating an instrument for the study.

As the Appendices of the SUTOE Guide (1967 Draft) contained many forms for suggested use in the program, several of which had been used by the pilot schools the first year, the investigator decided to benefit from these materials in preparing an assessment instrument for use in 1968-69. Almost all of the 128 components were adaptations from the original appendix materials. A few of them were originally designed as test items, and most were self-assessment forms of one kind or another. Several of them were adaptations of materials that had been adapted from Hawaii which, in turn, had adapted them from New York. Some of the items were originally in the Guide, as two or three choice answers, but for this study converted to four choices. A few of the items were inspired from the field of sociology. Some were adapted from Coleman's study,⁹ parts of which

had already been incorporated into the SUTOE Appendices. Several of the items were from those developed by the writer over a period of years while working in guidance, and in teaching career units in public schools. These had not previously been treated statistically, but they had noted change for individuals.

The majority of the components had not been designed originally as items with four answer choices, so adaptation was essential for expediting statistical treatment. Basically, the instrument is then a compilation of many items that have had considerable use. Suggestions for making it with a common design, each item having the same number, in this case four choices, came primarily from a seminar of graduate students at Oregon State University, and from a post-doctoral researcher¹⁰ on campus who had had considerable experience in the design and use of research instruments.

With all of this consultation, a tentative instrument was prepared and submitted for consideration to several individuals with whom the writer worked. As they made helpful suggestions, the rough draft was redone and administered to a sample of respondents. Five junior high students filled out the form, taking careful note of

⁹ Equality of Educational Opportunity. James S. Coleman et al., U. S. Office of Education publication, 1966.

¹⁰ E. Wayne Courtney of Stout State University

time required and difficulty of the items. They were requested to respond to each item in the six pages. In the summer of 1968 the 24 SUTOE Workshop enrollees also filled out the form, then analyzed the components for difficulty and value in assessing attitudes, feelings, opinions, interests, and knowledge of junior high age youth. Helpful suggestions were made, after which the instrument was rewritten and prepared for use.

The form was again tried out on selected teenagers, and examined by colleagues in work, then reproduced in quantity as no major objections had arisen though it was also recognized that the form was not a panacea for determining final choices of students on any item listed. It was simply designed to indicate how students felt about any topic offered, at a given time, with the hope that experiences in SUTOE might lead to different answers on many of the items, at a later administration of the assessment form. It was not expected to serve as an achievement, aptitude, or ability test, nor was it considered to be a personality test as such. However, for teachers and students using the form, it should help provide more insight.

Final selection of components used was made by the investigator. They were grouped roughly into the categories of economic-labor market knowledge, tentative career choice, self concept and personal thoughts, self understanding, and self evaluation. No attempt was made to treat the information by category, as each item was dealt

with separately.

Four dependent variables are considered for each component in the study. They are ranked 1 - 2 - 3 - 4 for the purpose of the statistical treatment. The score denotes the responses of members of each of the groups. The instrument was administered in the fall of 1968 and again in the late spring of 1969, to the same groups of students to determine if differences existed among groups chosen for consideration.

Identification of Groups

The experimental groups consisted of SUTOE enrollees. Only students enrolled in SUTOE, as defined by the school and the researcher were included in the study. Ideally, this would have meant those in full year programs in either grade eight or nine, working with a teacher who had been through at least one of the summer workshop experiences, and who was following the general guidelines suggested in the Teacher's Guide.

The decision was made to use groups ordinarily referred to as SUTOE, if they met most of the criteria established. Thus, if a school was conducting a program using the general philosophy and concepts of the course, though only on a one-semester or every other day basis, and the instructor had been in the Workshop, it was to qualify. Also, if the Guide was being used extensively in a full year

program, though the teacher had not been in the workshop (as was true in one case) the program was acceptable to assess as SUTOE.

The six control groups were selected by the investigator after consultation with colleagues in SUTOE, and associates in his work. Four of the groups were eighth graders and two were ninth. This was about the same proportion as anticipated enrollment in the program. Administrators in these schools graciously gave consent so that counselors and selected teachers could cooperate in the project. The schools were chosen on the basis of having some commonality in size, economy, location, or convenience for administration. Each of the control groups consisted of one classroom group. One group involved the total eighth grade of that school, and in each of the others the school officials cooperating with the project were requested to select a seemingly representative section of the grade identified. Thus, no special groups were involved in the controls.

The major purpose in searching for control groups was to attain cooperation from schools where they were least likely to have had contact with the SUTOE program through teacher attendance at a workshop, or via general philosophical exposure to the students. As nearly as could be determined, this was accomplished.

Early in the fall of 1968 it was anticipated as many as 21 experimental groups could be established. There would be 14 schools involved from the Clatsop, Columbia and Tillamook Counties area,

one each from Polk, Coos, Douglas, and Malhuer Counties, plus one school building in Klamath County with three different instructors each with two sections. The SUTOE enrollees assigned to individual instructors ranged from as few as a dozen students in a one semester program on an elective, or selected basis, to as many as two sections on a more elective, or free choice basis for a full year. Several of the schools offered it as a required course for one semester or a full year. These ranged in enrollment from one small section, 20 or fewer, to five sections totaling 130 or more students. No particular pattern was apparent for those in either the eighth or ninth grade programs. The potential total for consideration in the study consisted of about 850 SUTOE enrollees and approximately 150 control students. These were all identified by groups rather than on an individual basis.

The investigator proposed to his committee that only those who filled in the instrument in both the fall and spring would be treated in the study. This was accepted, and the research proceeded on this basis.

In one of the larger schools (programs) the fall responses for one whole section were lost, and in that same school more than one half the total SUTOE enrollment did not get to take the spring administration of the form. Those that did, did it on the last day in the building for the year; thus it must be kept in mind that the validity of the responses may be more questionable than for most of the groups.

Nevertheless, it seemed appropriate to treat the responses to see if there were differences under such circumstances.

As only those were tested who had been in the program all year, or all semester, the result was a drop of as many as 20% from fall to spring in some groups. In both the control and experimental groups this was the case, though in a few places there was a difference of well under 10%. It was assumed by the researcher that a large enough sample remained from which to draw conclusions and inferences.

In the end, more than three times as many eighth graders were in the experimental treatment, as most of the attrition was from ninth grade programs. Nineteen experimental groups and six control groups were identified for treatment. Hence, a total of 25 class groups were involved in the study. Each teacher's group was treated separately and compared with all others. A random 10% sample from SUTOE enrollees in the three northwest Counties was also treated for a group mean.

Method of Analysis

The statistical analysis included a comparison of the means of groups and a test of significance by use of the t-test.¹¹ Each of the

¹¹ The writer is indebted to Lyle D. Calvin, Chairman of Statistics, OSU, and others of his staff, for help in selecting the formula, and interpretation of the data computed.

26 groups mean scores for each component was tested against the mean scores for every other group in order to ascertain if there was a significant difference among groups. This analysis was made for both the fall and the spring administrations of the instrument, among and within groups, via the LSD test.

The ten percent sample is not included in the total experimental group means, nor are the experimental groups from the school which did not have enrollees complete the spring test until the final day of school. The reasons seem obvious to this researcher, and they were alluded to earlier.

The variance in the mean scores among groups was analyzed in the following manner, for each component in the pre- and post-administration with both experimental and control groups. There are three sets of values for each group for each item. These apply to each experimental and control group, to the experimental group as a whole, and to the control group as a whole. The values are:

\bar{X} (mean) score before treatment

\bar{X} = score at the end of treatment

\bar{X} = differences in \bar{X} scores among groups

The formulas shown below were used for the t-test and the LSD test.

$$t = \frac{\bar{X}_c - \bar{X}_e}{\sqrt{\frac{\sum D^2 - \frac{(\sum D)^2}{N}}{N(N-1)}}}$$

or D for differences
between scores of
each pair.

$$LSD = t \sqrt{2 \left[\frac{\sum x_1^2 - \frac{(\sum x_1)^2}{N_1} + \sum x_2^2 - \frac{(\sum x_2)^2}{N_2}}{N_1 + N_2 - 2} \right]}$$

From this analysis it was believed there would be enough information on which to base objective judgements regarding the value of the SUTOE programs. Subjective evaluations at the local, state and research level aids in this appraisal. Though the statistical treatment in itself does not indicate the causes for significant differences, it does provide information from which inferences may be drawn.

Summation

The instrument was finalized in the form used in the summer of 1968, and administered in the early fall of 1968, within the first few days of school opening, to selected groups. It was administered again to the same groups of students in the spring of 1969, during the last month of school. A two-page "Suggestions for Administration" handout (Appendix B) was made available to each teacher administering

the six page instrument in the fall. For the spring testing, a one page dittoed guideline (Appendix C) was made available to the teacher.

Each school using the Assessment Form was contacted by the designer of it via phone and/or in person. The statistical treatment of the information was undertaken as soon as the tallies for each student's responses were completed. The research is reported on in the chapter immediately following this.

V. ANALYSIS OF DATA

Introduction

Analysis of the data has revealed a number of observations which have some validity in seeking conclusions about the SUTOE programs. The major findings are shown in two tables. Additionally, comments concerning significant and other differences among the 26 identified groups are presented with explanation of the items involved.

Differences Within and Among Individual Groups

Statistical treatment of the data permits acceptance of Hypothesis One, p. 2. It hypothesized there would be no significant differences in mean scores of groups of students tested in the fall. The LSD test revealed no significant differences among groups of students, tested in the fall, whether enrolled in SUTOE or in control groups. With nearly every item, the differences were focused around two or three of the individual groups at either end of the spectrum; but placed in rank order, they were without statistically different means among themselves.

Mean scores in the fall, on item one, for example, ranged from a low figure of 1.625, Group J (denoting a tendency toward agreement with the statement) to 2.563, Group W, tending to identify it as false. Item 128 means ranged from 1.846, Group O, to 2.500 for

Group W. However, the LSD test identified no significant differences within the parameters of these means.

It was necessary to analyze the data further to discover if there were significant differences in mean scores for individual groups in the spring as compared to the fall. Hypothesis Two, p. 2, dealt with this question. It hypothesized there would be no greater differences in group mean scores among groups in the spring than in the fall. The LSD test revealed no significant differences among the groups in the spring, and in essence, Hypothesis Two is accepted. However, the analysis did reveal fall/spring differences for individual groups.

A detailed examination of the data revealed these differences between fall and spring for the groups on individual items. These items show whether there was a plus or minus score change and may be indicative of growth for a group. Analysis of individual student responses showed there was a tendency to make few radical changes from fall to spring on most items. Nevertheless, as groups, there were significant differences at the .05 level, and very limited numbers at the .01 level. These are discussed in the following paragraphs.

The data shows 37 significant fall/spring (F-S) differences in mean scores for individual groups. Only two of these differences occurred within control groups. They were in the Self Evaluation section regarding personality:

- 123. I believe that I am: Regarded as a "sales" type.
- 125. Bothered by fears that I will not succeed.

In Item 123, the mean score moved to the right and the mean for item 125 moved to the left, both for Control Group U. Throughout the Assessment Form, the dependent variables are ranked from strongly positive on the left to strongly negative on the right. A total of 32 items had one or more groups which showed a difference at the .05 level, a few of which also were at the .01 level, in the F-S assessment. All except the two referred to above were by SUTOE groups.

In Section A, the first 17 items, facts are more readily ascertainable for those responding. This category, dealing with economic, labor supply, population, and occupational information had five of the 32 items showing significant differences, but ten different groups were involved, all with positive change at the .05 LSD level, except number 17 at the .01 level. The items were true/false choices.

They were:

- 3. The U.S. work force presently totals over 70,000,000.
- 4. Approximately 1/3 of the total U.S. labor force (employed workers) is female.
- 5. The average female may expect to work in gainful (paid) employment outside the home during her life time, for at least 25 years.
- 16. Nationwide, about 1/3 of the young people of high school graduating age do not graduate, even in these times.
- 17. In Oregon, more than 15% of the students who enter grade 9 do not graduate from high school.

In that section, item 4 had four experimental groups, and item 5 had three, showing statistically significant differences in means. The other three had one each. Groups B, J, O, and Q mean scores for item 4 are shown here.

Group	B	J	O	Q
Fall	2.125	2.500	1.750	2.346
Spring	1.400	1.750	1.071	1.615
F-S Dif	.725	.750	.679	.731
F-S	LSD .05 level equaled .677			

Groups A, B, and O mean scores were significantly different between fall and spring testing on item 5, as shown below.

Group	A	B	O
Fall	3.000	2.938	3.000
Spring	1.722	1.625	1.786
F-S Dif	1.278	1.313	1.214
F-S	LSD .05 level equaled 1.246		

Other changes, though interesting, were not identifiable as statistically significant.

Questions dealing with understanding of information useful to Tentative Occupational Choice, items 18 through 39, included six (all SUTOE groups) which revealed means that were statistically different in F-S testing, for one group each. These were at the .05 level, and indicate plus change unless otherwise stated. The items were:

19. My choice is different than it was six months ago. - Group M.
20. I believe I can meet the following Requirements: Basic abilities/aptitudes. - Group O.

"I believe the work would satisfy me due to:" began each of the following items.

- 26. Amount of travel. - Group Q, minus change.
- 28. Opportunity for recognition. Group B.
- 36. Providing choice of life-style outside of work. - Group B.
- 37. Allowing choice of locations for living. - Group N, minus change.

Subjectively viewed, it appeared the experimental groups had proportionately more other F-S changes in the category dealing with information useful to occupational choice, but they were not statistically significant by the criteria used.

Section D, MY THOUGHTS, items 40 through 60, contained three items which revealed different means, statistically, among SUTOE groups in the F-S testing. They were:

- 41. Good luck is more important than hard work. - Group Q.
- 47. Learning is very difficult for me. - Group N, minus change.
- 53. A student with a good personality will do better in life than a student with high grades. - Group O.

Other findings in this section, though not statistically significant, show considerable differences in means intriguing to the investigator.

They are:

- 40. People who accept their condition in life are happier than those who try to change things. - Six with minus change, four of which were in the six control groups.
- 50. My teachers think I could be a better student. - Five with plus change, none of which were control groups.

57. Each new year of school has made me feel better about school than the year before. - Eight with minus change, two of which were control schools.

SELF UNDERSTANDING, Section E, included 20 items, four of which reflected statistical change by one group each.

61. I am the type of person who follows instructions. - Group Q.
62. I like doing a task exactly the same way each time. - Group O.
69. I enjoy meeting new people. - Group O, minus at .01 level.
78. I remain calm when--Having plans suddenly changed. - Group O.

There was little support for the few statistical differences in F-S testing in Section E, among the rest of the groups. Group O, for example, in item 69 with statistical minus difference at the .01 level was the only one showing any change at all for that item.

Section F, dealing with Self Evaluation, had mixed patterns. The Values subsection contained 13 items, five of which reflected significant differences in means by one group each. They were:

83. Short hours and "good" vacations will have more appeal than concern about security and retirement. - Group O.
85. The wife should hold a job outside the home to help the family's standard of living. - Group Q.
86. The wife should hold a job outside the home if she wants to, even if the income is not needed. - Group N.
90. The importance of . . . Neat personal appearance. - Group Q, minus change.
93. The importance of . . . Having a steady job and/or keeping busy. - Group O, minus change.

The remaining aspects of Self Evaluation dealt with interests, achievements, aptitudes and personality appraisal. They included nine items showing significant change by one group each, in the F-S assessment. They were:

- 98. My achievements ... in: Music. - Group O, minus change.
- 106. My interests ... Music. - Group O, minus change.
- 108. My interests ... Art. - Group O, minus change.
- 109. My interests ... Serving people. - Group N, minus change.
- 120. My aptitudes ... Speed and accuracy in assembling. - Group O.
- 121. My aptitudes ... Drawing and painting. - Group J, minus change.

Items 123 and 125, showing significant change in means for Control Group U, have been referred to previously, p. 56.

- 127. My personality ... One who treats others so their feelings are not hurt. - Group O, minus change.

A phenomenon which seemed to be worth noting occurred with some of the groups. For example, Group J experienced a total of 45 readily observable changes in means, of 128 components, though only two of these were statistically significant. Seventy-one percent of J's changes showed the mean score moving to the right. Group N showed recognizable changes in 40 items, only four of which were statistical. Sixty-seven percent were minus changes. There were relatively more changes noted in Groups O, P, and Q than in most of the other groups. Group O had 22 minus changes among the 53 changes noted,

14 of the total being statistically significant at the .05 level of confidence, and two at the .01 level. Group P showed obvious changes, none statistical, in 36 items. Forty-five changes were noted for Group Q, six of which were statistically significant.

The obvious or noticeable, not statistical, differences in mean scores F-S of individual groups have been determined subjectively by the investigator, considering the size of the statistical difference for the individual item. Note that Appendix D identifies the 26 groups involved in the study.

Total Groups Significant Differences Fall vs. Spring

Hypothesis Three was rejected on the basis of analysis of data that is illustrated in Table I. The hypothesis projected there would be no significant differences between the mean scores of the total control group or the total experimental group in either the fall or spring testing. The evidence was otherwise for a number of components.

There was significant change at the .05 or .01 level, between fall and spring in the experimental groups as a whole, on 22 items. These are shown as column one in Table I. Column two reveals six items where there was significant change in the control groups, as shown by the t-test. Only one item showed change by both groups, but the experimental group's change was at the .01 level vs. .05 level for the control group. Eight of the 22 items showing statistical change

for the experimental group as a whole showed statistical change for individual SUTOE groups. Three items showing significant change by individual SUTOE groups also revealed statistical change for the control group as a whole.

The experimental group mean scores were statistically different between fall and spring for the following items:

2. By 1975 the U. S. population is expected to be more than 225,000,000 according to the Census Bureau.
4. Approximately 1/3 of the total U. S. labor force (employed workers) is female.
5. The average female may expect to work in gainful (paid) employment outside the home during her life time, for at least 25 years.
11. At least 2,500,000 young people enter the labor market yearly, for the first time.
15. The service workers group may include people in hospital and hotel work, as well as firemen and policemen.
16. Nationwide, about 1/3 of the young people of high school graduating age do not graduate, even in these times.
17. In Oregon, more than 15% of the students who enter grade nine do not graduate from high school.
19. My choice of occupation is different than it was six months ago.
21. I believe I can meet the following requirements: Important personality characteristics.
27. I believe the work would satisfy me due to: Pay and other financial benefits.
31. I believe the work would satisfy me due to: Security of employment.
43. When a person is not successful in life, it is his own fault.
50. My teachers think I could be a better student.
53. A student with a good personality will do better in life than a student with high grades.

- 57. Each new year of school has made me feel better about school than the year before.
- 66. I enjoy writing.
- 67. I enjoy speaking/talking to groups.
- 75. It is more important to examine the advantages than the disadvantages when considering an occupation.
- 83. Short hours and "good" vacations will have more appeal than concern about security and retirement.
- 84. Having a job and family appeals to me.

The last six above all showed minus changes in the mean scores.

- 86. The wife should hold a job outside the home if she wants to, even if the income is not needed.
- 102. How well have I done in: Student government. (This last item also showed negative change.)

The control group mean scores were statistically different between fall and spring for the following items.

- 1. The U.S. population at present is at least 195 million.
- 4. Approximately 1/3 of the total U.S. labor force (employed workers) is female.
- 62. I like doing a task exactly the same way each time.
- 80. I remain calm when -- Participating in a sporting event. (This one showed negative change.)
- 106. My interests: How well do I like: Music.
- 116. My aptitudes: How good am I at: Using figures and symbols. (This one also showed negative change.)

Levels and directions of change as shown by the t-test for the F-S testing are given for each item in Table I on the following page.

Table I. Items Showing Significant Differences in the Means Between Fall and Spring Administration. t-test

Item	Experimental Group 15 D. F.	Control Group 5 D. F.
1		*
2	*	
4	**	*
5	**	
11	*	
15	*	
16	*	
17	**	
19	**	
21	*	
27	*	
31	*	
43	*	
50	**	
53	**	
57	-**	
62		*
66	-*	
67	-*	
75	-*	
80		-*
83	-*	
84	-*	
86	*	
102	-*	
106		*
116		-**

* .05 level of Significance

** .01 level of Significance

- indicates Mean score moved to right in Spring Assessment

Significant Differences, Control vs. Experimental, F-S

Table II shows additional evidence on which Hypothesis Three was rejected. The t-test identified several more significant differences at the .05 level, some of which were also at the .01 level, between fall and spring testing with control and experimental (total) groups. Twelve (Col 1) were shown in the fall and 20 (Col 2) in the spring, an increase of 67% in the number of items. Eight items which showed statistical differences between total control and total experimental groups in the fall did not show tested differences in the spring. They were items 27, 28, 43, 44, 53, 69, 86, and 116.

Several of the items referred to in Table II have been reproduced in the preceeding pages so will not be listed here. (Appendix A contains the complete Form.) Those new to the list with significant differences in the fall were:

- 35. I believe the work would satisfy me due to: Challenging my abilities/talents. (Significant, both fall and spring.)
- 44. I'll have a hard time getting the right kind of jobs, even if I get a good education.
- 105. My interests: How well do I like: Mathematics. (Both a fall and spring difference was shown.)

Items new to the listings due to mean score statistical differences in the Control vs. Experimental Spring testing included the following:

- 7. There is greater unemployment (percentage) among Negro workers than among white workers.

- 13. Most industries require applicants to write formal letters of application, or fill out detailed information sheets, before they can be considered for employment.
- 30. I believe the work would satisfy me due to: Opportunity for service to others.
- 35. (Referred to above.)
- 72. I would rather do research than repair work.
- 88. Other values that are important to me include: Holding office.
- 89. Other values that are important to me include: Club membership.
- 97. My achievements: How well have I done in: Mathematics.
- 105. (Referred to on preceding page.)
- 114. My aptitudes: How good am I at: Forming mental pictures.
- 126. My personality: I believe that I am: Able to tackle tough problems and succeed.

Results of the analysis are given in the table which follows.

The significant levels and directions of change in means for control vs. experimental total groups in the fall and spring testing are shown in Table II for the specific components involved. Column three identifies the six items where there was statistical difference between the Control F-S, and the Experimental F-S mean scores, as shown by the t-test, using 18 degrees of freedom.

A total of 61 of the 128 items in the Assessment Form showed significant differences in some aspect of the research. In essence, it can be said that groups of students in the SUTOE experience responded differently than control groups on many items of the Assessment form, especially for the second administration of it. The

foregoing discussions, and the tables presented, have illustrated these findings.

Table II. Significant Differences in the Means Between Control and Experimental Groups in the Fall and Spring, and in the Fall minus Spring (F-S) using the t-test with 18 Degrees of Freedom.

Item	Fall Control/Exper.	Spring Control/Exper.	F-S
4		- **	
5		- *	
7		*	
11		- *	
13		*	- *
15		- *	
17		- **	
27	**		
28	*		
30		*	
31	*	*	
35	**	*	
43	*		
44	- *		- *
50		- *	**
53	**		*
69	*		
72		**	
86	*		
88		*	
89		*	
97		*	
105	**	*	
106		*	- **
109	*	*	
114		**	
116	**		
126		*	- *

* .05 level of Significance

** .01 level of Significance

- indicates Mean score moved to right in t-test

VI. CONCLUSIONS, QUESTIONS, AND RECOMMENDATIONS

Interpretation of Findings

One of the primary purposes of this study suggested that responses to an assessment form would be analyzed and compared for groups of students in SUTOE programs and for others not in SUTOE. The preceding chapter presented evidence to show there were significant differences in responses on many items in a fall/spring test of groups of students. There were more differences in the experimental than in the control groups. This leads to the conclusion that SUTOE experiences do influence large numbers of youth enrolled in the program.

The experimental groups possessed more factual information at the end of the year regarding economic, labor supply, population, and occupational groupings than did the control groups, p. 56-57. Additionally, they reflected a greater degree of understanding of factors important in making a tentative occupational choice, as shown by analysis of data in Section B of the Assessment Form.

Section D, MY THOUGHTS, which reflected on the self concept, revealed more change of thinking on the part of experimental groups than of control groups, on most of the items. Thirty-five percent of the responses showed subjectively determined noticeable change for SUTOE groups as compared to 13% for control groups. An

exception to the pattern was found in item 40 which tended to show that control groups found less satisfaction in accepting conditions without trying to change them. Two-thirds of the control and two of 19 SUTOE groups mean scores moved right noticeably (not statistically significant) for the spring testing. Of special interest too, item 57, is that eight of the 26 groups reflect more negative feelings about school with each passing year. These included two of the control groups. The negative feeling was also shown at the .01 level of significance on the t-test for the total experimental F-S testing.

SELF UNDERSTANDING, Section E, gave more evidence of changes in attitudes and feelings on the part of proportionately more (16%) experimental groups than control groups with eight percent. However, not all of these could be interpreted as being of a positive orientation. For example: items 66, "I enjoy writing"; 67, "I enjoy speaking/talking to groups"; and 75, "It is more important to examine the advantages than the disadvantages when considering an occupation"; showed movement toward the never category for the total experimental group. The change was significant at the .05 level as shown by the t-test.

Section F, SELF EVALUATION, showed mixed patterns of responses by groups. The Values subsection tended to show more change in thinking by the experimental groups, 17%, to 13% for control groups. Three of the items also revealed statistical change for the total

experimental group. Other components of the section, relating to achievements, interests, aptitudes and personality, offered little that was conclusive, based on the data analyzed, other than to recognize that 16% of the responses by experimental groups were noticeably different in the spring, as compared to 10% of the control groups. It was of interest to note that item 122, "I believe that I am: Well liked by those who know me." did not show one single group with statistical or noticeable difference in means in the F-S testing.

Subjective Judgements Reviewed

A second primary purpose of this study was consideration of data, and subjective judgements made relative to SUTOE. The data collected and treated statistically is dealt with above. Assumptions and subjective judgements regarding the program were considered in earlier chapters. However, it is appropriate here to refer to two major points.

Many of the SUTOE teachers have reported marked changes in individual students which they, and their colleagues, believe have been due to experiences in the program. In this frame of reference, they are speaking of positive developmental changes such as are sought in most schools.

Jones' (46) analysis of responses to the Assessment Form led him to conclude there are marked differences between fall and spring

in the way SUTOE students see themselves. His examination was of an extensive sampling of students from the three-county area of northwest Oregon.

Questions of Interest

While analyzing the data it was found that in some of the SUTOE groups where the researcher, and others intimately involved in the program, anticipated that statistical or obvious differences might be revealed by responses of groups of students to many items, it was not verified. This led to closer examination of some of the possible reasons. Personnel directly involved are sure that some of the better programs are among those showing less change. Reflection has led to the awareness that these were also among the larger groups studied. Therefore, the variety of different responses may have tended to balance out, especially on the data for individual groups. At the same time, with the statistical weighting that is done for such a study, it may have helped to influence total group means for items. In addition, subjective judgements of those on the scene are still considered valid by educators for many situations in a course such as SUTOE.

A reservation must still be maintained concerning the validity of responses for groups O, P. and Q, in light of the knowledge that the spring assessment was conducted on the final day in school. This situation is dealt with in Chapter IV, p. 49, and caused much concern

to the investigator. However, it must be recalled these groups, and Group T, were not included in the data treatment for total experimental group change. Nevertheless, both Tables I and II revealed trends similar to those among the individual treatments. Furthermore, there is really no way to determine at this time whether the most serious and responsible students filled their forms in on the last day, which could indicate real change for them, or whether only those who were recognized in time to receive the request responded in a casual manner. It is realized the three groups referred to had proportionately more change indicated than did most of the others. No apology is offered for the decision to include all groups in the comparison of differences and changes among groups, but caution is urged in reading meaning into the information analyzed.

It is still too soon to determine if attitudes, feelings, opinions and knowledge changes or understandings made during the time in SUTOE will have a lasting impression on curricular, educational, and career choices of students. Feedback from the field leads one to believe that it will. Hopefully, there will be relevant choices for the SUTOE alumni as they progress through school.

Detailed examination of item responses of individual students would provide additional information. There was no intention of doing this in the present study, but rather to investigate chiefly among groups of students receiving somewhat common experiences. School

systems using the Assessment Form, or an adaptation of it, would be well advised to treat the responses on an individual basis in a statistical analysis. Even where this is not done, useful information is available for developmental guidance and classroom planning on an individualized basis.

Need for Further Research

Almost any approach to research may be found to be inadequate when the investigator is seriously searching for understanding of significant changes in population samples, as revealed by statistical analysis. The problem has been made more apparent in this investigation with each effort to wrestle meaning from the data. Hindsight leads to the belief that other methods of compiling the information, and of treating the data, would have proven to be as useful and perhaps more amenable. The difference in contribution to knowledge can only be speculated about, but it might be well to consider in other studies of this topic, the use of the Sign Test to test for plus and minus changes only. For example, in this, the investigator would assume that he was dealing with normal populations; thus, more statistically significant changes in the experimental group would indicate program effect. Other simplified rank order approaches such as the U-test might also provide useful information for comparing changes in experimental and control groups.

More sophistication of the Assessment Form is recommended before it is used extensively. There may be some question regarding Section A components as compared to the others. They tend to call for dichotomous responses while the rest are interval scale which are more adaptable to the statistical analysis used in this study.

Observations and Recommendations

As cited in preceding chapters, experts in guidance, general, and vocational education have urged school systems to develop and adopt vocational guidance programs with goals which are similar to SUTOE. Analysis of the statistics in this study, as well as verbal and written communication concerning progress and problems in the ongoing programs over the last three years, leads this writer to make the following statements about SUTOE:

1. It should be a separate and identifiable course in the junior high school curriculum, but coordinated closely with others.
2. Instructors should be guidance oriented within the context of understanding developmental processes in youth; with ability to accept adolescents as they are in order to assist them in implementing a positive self concept; with appropriate employment experiences; a desire to work with junior high age students on an individual and group basis, and have a commitment to relating the needs of youth to the

world of work.

3. The course should be student needs centered, maintained with its own identity, but modified as need is shown, based on experience and evaluation. It should then be recommended to schools on a broad spectrum, still within the points listed here.
4. There is a necessity for in-service or other workshop experience for all instructors assigned to teach SUTOE.
5. Schools which do not wish to commit themselves to this philosophy should not be encouraged to acquire the Teacher's Guide to SUTOE, as there are many other approaches to vocational guidance, no doubt just as valid in many cases. Some of these were cited in this research. Using the Guide as a reference among many would be one thing, but as an excuse to identify an inadequate approach to occupational guidance as SUTOE is quite another.

Relevant education for junior high age students must include extensive career exploration and examination of individually developing life styles. SUTOE provides a vehicle for implementation of such a goal. If it does not yet achieve this worthy objective, it at least has the potential. Support in the form of finances and effort is needed to make it a regular part of the junior high school curriculum.

BIBLIOGRAPHY

1. Andersen, Dale G. and Robert A. Heimann. Vocational maturity of junior high school girls. *The Vocational Guidance Quarterly* 15:191-195. 1967.
2. Brandywine Springs Junior High School. A profile of SWEP: school & work experience program. Wilmington, Delaware. n.d. n.p. (Received thermofax copy Feb. 1969)
3. Arnold, Walter M. Vocational guidance and vocational education: the common goal. *The Vocational Guidance Quarterly* 16:2-8. 1967.
4. Bailey, John A. Career development concepts: significance and utility. *Personnel and Guidance Journal* 47:24-28. 1968.
5. Barlow, Melvin L. (ed.). Vocational education: yearbook 64, part 1. Chicago, University of Chicago, 1965. 301 p.
6. Beam, J. E. Introduction to vocations. 2d. draft. Raleigh, North Carolina, Department of Public Instruction, 1964. 94 numb. leaves. (Mimeographed)
7. Beamer, Rufus W. Information on vocational education for guidance counselors. Moravia, New York, Chronicle Guidance Publications, 1966-67. 4 p.
8. Bennett, Margaret E. Evolution in vocational guidance. Moravia, New York, Chronicle Guidance Publications, 1964-65. 6 p.
9. Between education and the world of work. Greeley, Rocky Mountain Educational Laboratory, 1968. 27 p.
10. Blauner, Robert. Alienation and freedom. 1st Phoenix ed. Chicago, University of Chicago, 1967. 222 p.
11. Brandon, George L. (ed.). Research visibility: human resources and vocational guidance services. Topic one: career development. *American Vocational Journal* 43:33-39. Dec. 1968.
12. Brubaker, Dale L. Anthropology and vocational guidance: an experimental approach. *The Vocational Guidance Quarterly* 15:209-212. 1967.

13. Campbell, Edward A. Career guidance - an integrated program. *Industrial Arts and Vocational Education* 58:112-115. Mar. 1969.
14. [Campbell, Hartley B.] (ed.). Self-understanding through occupational exploration (pilot draft). Salem, Oregon, State Department of Education, 1967. 194 p.
15. Campbell, Hartley B. (ed.). Teacher's guide to: SUTOE self understanding through occupational exploration. Salem, Oregon, Board of Education, 1969. 198 p.
16. Career oriented relevant education (CORE) planning and piloting a total state program of curriculum revision based upon a careers centered approach. A Proposal submitted by Oregon State University to the U. S. Commissioner of Education. Corvallis, October 29, 1968. 35 numb. leaves
17. Carkhuff, Robert R. , Mae Alexik and Susan Anderson. Do we have a theory of vocational choice? *Personnel and Guidance Journal* 46:335-345. 1967.
18. Circle, Duncan F. et al. Career information service. Boston, Commonwealth of Massachusetts, Department of Education, Bureau of Vocation Education, 1968. 173 p.
19. Clary, Joe R. and H. E. Beam. Realistic vocational education for all ninth graders. *The Pathfinder: Introduction to Vocations Newsletter*. Raleigh, North Carolina, 1:8-12, 90-94. Nov. 1964.
20. Crites, John O. Appraising the appraisal instruments. *American Vocational Journal* 43:22-24, 53. Dec. 1968.
21. Crites, John O. Measurement of vocational maturity in adolescence: 1. attitude test of the vocational development inventory. *Psychological Monographs by the American Psychological Association* 79:1-36. 1965.
22. D'Costa, Ayres and David Winefordner. A cubistic model of vocational interests. *The Vocational Guidance Quarterly* 17:242-249. 1969.
23. Demos, George D. and Bruce Grant. Career counseling in depth. Moravia, New York, Chronicle Guidance Publications, 1967-68. 5 p.

24. Draper, Dale C. (ed.). Educating for work. Washington, D. C., National Association of Secondary School Principals, 1967. 115 p.
25. Dugan, Willis E. Vocational guidance: a new accent. American Vocational Journal 41:14-15. Oct. 1966.
26. English, Urma. An 8th grade group guidance unit in educational planning. The School Counselor 15:137-141. 1967.
27. Farson, Richard E. The education of Jeremy Farson. The School Counselor 16:328-342. 1969.
28. Feldman, Marvin J. Making education relevant. New York, The Ford Foundation, 1966. 14 p.
29. Feldman, Marvin J. Public education and manpower development. New York, The Ford Foundation, 1967. 22 p.
30. Flores, Thomas R. and Leroy C. Olsen. Stability and realism of occupational aspiration in eighth and twelfth grade males. The Vocational Guidance Quarterly 16:104-112. 1967.
31. Gross, Edward. A sociological approach to the analysis of preparation for work life. Personnel and Guidance Journal 45:416-423. 1967.
32. Guide for implementing a ninth grade vocational economics course. West Carrollton, Ohio, West Carrollton Junior High School, Mar. 1966. 40 numb. leaves, plus unnumb. supplemental sheets. (Mimeographed)
33. Gysbers, Norman C. (ed.). Proceedings: national seminar on vocational guidance, Northern Michigan University, Marquette, Michigan. Aug. 21-26, 1966. [Columbus, Ohio, State Department of Education] 1967. 151 p.
34. Hansen, Lorraine S. Theory into practice: a practitioner looks at career guidance in the school curriculum. The Vocational Guidance Quarterly 16:97-103. 1967.
35. Harris, Jo Ann. The computerization of vocational information. The Vocational Guidance Quarterly 17:12-20. 1968.

36. Harris, Marleau Smith. The effects of work experience programs on disadvantaged ninth grade students in Corvallis, Oregon. Ed. D. Thesis. Corvallis, Oregon State University, 1969. 126 numb. leaves.
37. Herr, Edwin L. Guidance and vocational aspects of education; some considerations. The Vocational Guidance Quarterly 17:178-184. 1969.
38. Herr, Edwin L. Implications for state vocational guidance program development from selected office of education supported conferences. Paper prepared for the National Conference on Development of State Programs for Vocational Guidance, Washington, D.C., Jan. 16, 1967 [1968]. 18 numb. leaves.
39. Herr, Edwin L. What we know about career selection. Moravia, New York, Chronicle Guidance Publications, 1967-68. 4 p.
40. Hershenson, David B. Techniques for assisting life-stage vocational development. Personnel and Guidance Journal 47:776-780. 1969.
41. Hilton, Thomas L. Cognitive processes in career decision-making -- a summary. Moravia, New York, Chronicle Guidance Publications, 1963-64. 7 p.
42. Hoyt, Kenneth B. Professional partnerships to serve students. American Vocational Journal 41:23-25, 36-37. Oct. 1966.
43. Hurt, Mary Lee. Educating for the world of work -- a team approach. Moravia, New York, Chronicle Guidance Publications, 1965. 4 p. (Reprint)
44. Imperatives in education. Washington, D.C., American Association of School Administrators, 1966. 180 p.
45. Jones, Perry W. "Pete". OVIS summary report, occupational plans - grade 8-9-10-11-12: first choice & second choice. Research conducted Spring 1969. Rockaway, Oregon. 24 unnumb. leaves. (Dittoed)
46. Jones, Pete. 1968-1969 SUTOE assessment test: fall-spring comparison. Summer 1969. Rockaway, Oregon. 14 unnumb. leaves. (Xeroxed)

47. Kaldor, Donald R. and Donald G. Zytowski. A maximizing model of occupational decision-making. *Personnel and Guidance Journal* 47:781-788. 1969.
48. Krasnow, Bernard S. Occupational information as a factor in the high school curriculum chosen by ninth grade boys. *The School Counselor* 15:275-280. 1968.
49. Law, Gordon F. A regular place for guidance. *American Vocational Journal* 44:27-28, 60. Mar. 1969.
50. Law, Gordon F. (ed.). Research visibility: career development theory and practice - career planning curriculum. *American Vocational Journal* 43:43-44. Mar. 1968.
51. Lockwood, Ozelma, David B. Smith and Robert Trezise. Four worlds: an approach to occupational guidance. *Personnel and Guidance Journal* 46:641-643. 1968.
52. Loughary, John W. (comp.). Guide for implementing an occupational guidance and placement program. Salem, Oregon State Department of Education, 1966. 70 numb. leaves.
53. McDaniels, Carl. Youth: too young to choose. *The Vocational Guidance Quarterly* 16:242-249. 1968.
54. Maes, Wayne and Martin Gerstein. Bridging the gap for junior high school students: facilitating educational and career choice. Moravia, New York, Chronicle Guidance Publications, 1965-66. 6 p.
55. Mapping your education, 1968-69 edition. Portland, Abbott, Kerns and Bell, 1968. 319 p.
56. Matthews, Esther. Career development and the educational process. Paper presented at Central Oregon Community College, Bend, June 12, 1968, for the Oregon Council for Curriculum and Instruction, Region 10 Workshop. 13 unnumb. leaves. (Mimeographed)
57. Mezzano, Joseph. A survey of the teaching of occupations. *The Vocational Guidance Quarterly* 17:275-277. 1969.
58. Miller, Adam W. Jr. Learning theory and vocational decisions. *Personnel and Guidance Journal* 47:18-23. 1968.

59. Miller, Delbert C. and William H. Form. Industrial sociology. 2d ed. New York, Harper & Row, 1964. 873 p.
60. Minnesota Guidance Series. Career planning: an outline for the ninth grade planning unit. St. Paul, State Department of Education, 1966. 92 p.
61. Morrison, Edward J. Project able: a vocational plan, grades 7, 8, and 9. Quincy, Mass., American Institute for Research, 1967. 60 unnumb. leaves.
62. Neff, Walter S. Work and human behavior. New York, Atherton Press, 1968. 296 p.
63. Nelson, Roger D. What are you going to be? School and Community. 55:27. April, 1969.
64. New Jersey. State Department of Education. Teacher's guide for a model program on introduction to vocations. Trenton, 1965. 85 unnumb. leaves. (Mimeographed)
65. Oklahoma. State Department of Education. A guide for developmental vocational guidance - grades K-12. Oklahoma City, 1968. 161 p.
66. Oregon. Governor's Education Improvement Advisory Commission. Final report. Salem, 1966. 89 p.
67. Perrone, Philip A. and Randolph S. Thrush. Vocational information processing systems: a survey. The Vocational Guidance Quarterly 17:255-266. 1969.
68. Peters, Herman J. and James C. Hansen. (ed.). Vocational guidance and career development - selected readings. New York, Macmillan, 1966. 466 p.
69. Pruitt, Anne S. Teacher involvement in the curriculum and career guidance. The Vocational Guidance Quarterly 17:189-193. 1969.
70. Roe, Anne. The psychology of occupations. New York, John Wiley & Sons, 1956. 340 p.

71. Roeber, Edward C. The school curriculum and vocational development. *The Vocational Guidance Quarterly* 14:87-91. Winter, 1965-66.
72. Rubinfeld, William A. and Robert Hoppock. Occupations course evaluated eight years later. *The Vocational Guidance Quarterly* 10:45-48. 1961.
73. Ryan, Doris W. and Eugene L. Gaier. Interest inventories and the developmental framework. *Personnel and Guidance Journal* 46:37-41. 1967.
74. Samler, Joseph. Vocational counseling: a pattern and a projection. *The Vocational Guidance Quarterly* 17:2-11. 1968.
75. Scates, Alice Y. Research on career development and vocational guidance supported by the U. S. Office of Education. Paper prepared for the National Conference on Development of State Programs for Vocational Guidance, Washington, D. C., Jan. 16-18, 1968. 14 numb. leaves. (Mimeographed)
76. Self-understanding through occupational exploration. Coos Bay Schools Pilot Program: Summary and Evaluation. Submitted to Oregon State Department of Education, June, 1968. 10 numb. leaves.
77. Small, George D. The utilization of occupational information in the school. Moravia, New York, Chronicle Guidance Publications, 1966-67. 6 p.
78. Smith, Edward D. Innovative ideas in vocational guidance. *American Vocational Journal*. 43:19-22. Dec. 1968.
79. Super, Donald E. *The psychology of careers*. New York, Harper and Brothers, 1957. 362 p.
80. S. U. T. O. E. evaluation. Klamath Union High School, Klamath Falls, Oregon, June 17, 1968. 4 unnumb. leaves.
81. Tennyson, W. Wesley, Thomas A. Soldahl and Charlotte Mueller. *The teacher's role in career development*. Rev. ed. Washington, D. C. National Vocational Guidance Association, 1965. 107 p.

82. U.S. Office of Education. Advisory Council on Vocational Education. Vocational education: the bridge between man and his work. Washington, D.C., 1968. 220 p.
83. Thompson, Jack M. Career development in the elementary school: rationale and implications for elementary school counselors. *The School Counselor* 16:208-210. 1969.
84. Thoresen, Carl E. and William A. Mehrens. Decision theory and vocational counseling: important concepts and questions. *Personnel and Guidance Journal* 46:165-172. 1967.
85. Tiedeman, David V. Career pattern studies: current findings with possibilities. Cambridge, 1965. 34 numb. leaves. (Harvard University. Graduate School of Education. Harvard Studies in Career Development no. 40).
86. Venn, Grant (ed.). Man, education and work. Washington, D.C., American Council on Education, 1964. 184 p.
87. Venn, Grant. Needed: a new relationship between education and work. Condensation from the speech presented at Kent State University, Oct. 15, 1964. Columbus, Ohio, Department of Education, 1964. 7 p.
88. Weaver, Glen L. How, when, and where to provide occupational information. Chicago, Science Research Associates, 1955. 47 p.
89. Williamson, E. G. Youth's dilemma: to be or to become. *Personnel and Guidance Journal* 46:173-177. 1967.
90. Winefordner, David W. (comp.). Suggested model for the full time counselor who conducts and coordinates an exploratory program in grades 7-9: Conference to develop objectives and models for a continuous exploratory program related to the world of work from junior high through senior high. Carrollton, Georgia, Aug. 18-23, 1968. [Carrollton, 1968] 61 p.
91. Zaccaria, Joseph S. Some aspects of developmental guidance within an existential context. *Personnel and Guidance Journal* 47:440-445. 1969.

APPENDICES

APPENDIX A

Date _____ Name _____
(Last) (First)

School _____ City _____

The SUTOE Assessment Form

SUTOE Enrollee: Yes No

ECONOMICS, OCCUPATIONS, CAREERS, JOBS

Please check the column that most nearly represents your feelings and/or knowledge about each item.

I know this is true (KT)

I think this is false (TF)

I think this is true (TT)

I know this is false (KF)

A. KT TT TF KF

[illegible]

1. The U. S. population at present is at least 195 million.
2. By 1975 the U. S. population is expected to be more than 225, 000, 000, according to the Census Bureau.
3. The U. S. work force presently totals over 70, 000, 000.
4. Approximately 1/3 of the total U. S. labor force (employed workers) is female.
5. The average female may expect to work in gainful (paid) employment outside the home during her life time, for at least 25 years.
6. More than 10% of the labor force in the U. S. is Negro.
7. There is greater unemployment (percentage) among Negro workers than among white workers.
8. Agricultural employment is expanding at a faster rate, nationwide, than most industries.
9. Unemployment rates are low due to an inflated economy.
10. Professional & technical occupations continue to have a shortage of qualified applicants.
11. At least 2, 500, 000 young people enter the labor market yearly, for the first time.
12. In most industries, skilled or journeymen workers must have graduated from a four-year college.
13. Most industries require applicants to write formal letters of application, or fill out detailed information sheets, before they can be considered for employment.
14. Skilled and other manual workers make up a larger percentage of the population than professional & managerial workers do.
15. The service workers group may include people in hospital and hotel work, as well as firemen and policemen.
16. Nationwide, about 1/3 of the young people of high school graduating age do not graduate, even in these times.
17. In Oregon, more than 15% of the students who enter grade 9 do not graduate from high school.
18. I (the one doing this) am quite sure from which occupational grouping I expect to choose my career.
19. My choice is different than it was six months ago.

Date _____ Name _____
(Last) (First)

School _____ City _____

SUTOE Enrollee: Yes _____ No _____

MY TENTATIVE OCCUPATIONAL CHOICE: _____
(Name it)

Please check the column that most nearly represents your feelings and/or knowledge about each item.

Very Well (VW), Fairly Well (FW), Poorly (P), Not At All (NAA).

B. VW FW P NAA I BELIEVE I CAN MEET THE FOLLOWING REQUIREMENTS:

[illegible]

20. Basic abilities/aptitudes
 21. Important personality characteristics
 22. Attain the necessary training/education
 23. Physical requirements; fitness, health, etc.
 24. Capital (money) requirements
- I BELIEVE THE WORK WOULD SATISFY ME DUE TO:
25. Duties involved
 26. Amount of travel
 27. Pay and other financial benefits
 28. Opportunity for recognition
 29. Opportunity for advancement
 30. Opportunity for service to others
 31. Security of employment
 32. Working conditions
 33. Friendly working companions
 34. Freedom from responsibility
 35. Challenging my abilities/talents
 36. Providing choice of life-style outside of work
 37. Allowing choice of locations for living

C. 38. MY OCCUPATIONAL CHOICE IS THE SAME AS IT WAS A YEAR AGO. Yes _____ No _____

39. AFTER CONSIDERING THE ITEMS AND RESPONSES ON THIS SHEET, I BELIEVE I NEED A NEW SHEET TO FILL OUT FOR ANOTHER OCCUPATION Yes _____ No _____

Date _____ Name _____
(Last) (First)

School _____ City _____

SUTOE Enrollee: Yes _____ No _____

MY THOUGHTS

Please check the column that most nearly represents your feelings and/or knowledge about each item.

Always (Alw), Usually (Usu), Seldom/occasionally (Sel), Never (Nev).

D. Alw Usu Sel Nev

				40. People who accept their condition in life are happier than those who try to change things.
				41. Good luck is more important than hard work.
				42. When I try to get ahead, something or somebody stops me.
				43. When a person is not successful in life, it is his own fault.
				44. I'll have a hard time getting the right kind of jobs, even if I get a good education.
				45. If I could change, I would be someone different from myself.
				46. Personal sacrifice should be made to get ahead in the world.
				47. Learning is very difficult for me.
				48. I would do better in school work if teachers did not go so fast.
				49. My chance to be successful in life is limited.
				50. My teachers think I could be a better student.
				51. My parents think I could be a better student.
				52. I could be a better student.
				53. A student with a good personality will do better in life than a student with high grades.
				54. Athletics in school are more helpful than academic subjects.
				55. Occupational education courses should be required for all high school students.
				56. The tougher the job, the harder I work.
				57. Each new year of school has made me feel better about school than the year before.
				58. I am able to do things well.
				59. My siblings (brothers and sisters) are able to do things better than I.
				60. My friends do things better than I.

Date _____ Name _____
(Last) (First)

School _____ City _____

SUTOE Enrollee: Yes No

SELF UNDERSTANDING

Please check the column that most nearly represents your feelings and/or knowledge about each item.

E. Al- Usu- Sel- Nev-
ways ally dom er

[illegible]

61. I am the type of person who follows instructions.
 62. I like doing a task exactly the same way each time.
 63. I am exact in the things I do.
 64. I am accurate in my oral and written work.
 65. I state my ideas clearly, verbally and in writing.
 66. I enjoy writing.
 67. I enjoy speaking/talking to groups.
 68. I would rather work by myself than with others.
 69. I enjoy meeting new people.
 70. I enjoy working with my hands.
 71. I prefer working outdoors.
 72. I would rather do research than repair work.
 73. I am more concerned about what I think of myself than of what others think of me.
 74. I feel more challenged than threatened when faced with decisions and responsibility.
 75. It is more important to examine the advantages than the disadvantages when considering an occupation.
- I REMAIN CALM WHEN--
76. Losing an argument
 77. Taking a test in school
 78. Having plans suddenly changed
 79. Losing something important
 80. Participating in a sporting event

Date _____ Name _____
(Last) (First)

School _____ City _____

SUTOE Enrollee: Yes _____ No _____

SELF EVALUATION: MY VALUES

Please check the column that most nearly represents your feelings and/or knowledge about each item.

F.	Al-	Usu-	Sel-	Nev-
ways	ally	dom	er	
1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	30
31	32	33	34	35
36	37	38	39	40
41	42	43	44	45
46	47	48	49	50
51	52	53	54	55
56	57	58	59	60
61	62	63	64	65
66	67	68	69	70
71	72	73	74	75
76	77	78	79	80
81	82	83	84	85
86	87	88	89	90
91	92	93	94	95
96	97	98	99	100

[illegible]

WHEN I TAKE/SEEK FULL TIME WORK:

81. The beginning salary will be more important than possible future raises.
82. Recognition from others will be of more concern to me than the work itself.
83. Short hours and "good" vacations will have more appeal than concern about security and retirement.

REGARDING FAMILY RELATIONSHIPS AND RESPONSIBILITIES:

84. Having a job and family appeals to me.
85. The wife should hold a job outside the home to help the family's standard of living.
86. The wife should hold a job outside the home if she wants to, even if the income is not needed.
87. When there is an able-bodied man in the home, he should be the sole (only) support of the family.

OTHER VALUES THAT ARE IMPORTANT TO ME INCLUDE:

88. Holding office
89. Club membership
90. Neat personal appearance
91. Maintaining standards of personal conduct
92. Home life with an easy-to-get-along-with family
93. Having a steady job and/or keeping busy

MY ACHIEVEMENTS: How well have I done in:

94. English and language
95. Social studies
96. Science
97. Mathematics
98. Music
99. Literature and reading
100. Art
101. Sports
102. Student government
103. Other school activities

Date _____ Name _____
 (Last) (First)

School _____ City _____

SUTOE Enrollee: Yes _____ No _____

SELF EVALUATION

Please check the column that most nearly represents your feelings and/or knowledge about each item.

Very Very Not at
 Much Some Little all

Very			Very
Good	Good	Fair	Poor
Al-	Usu-	Sel-	Nev-
ways	ally	dom	er

MY INTERESTS: How well do I like:

- 104. Science
- 105. Mathematics
- 106. Music
- 107. Literature
- 108. Art
- 109. Serving people
- 110. Persuading people
- 111. Planning and organizing
- 112. Keeping records
- 113. Fixing and repairing

MY APTITUDES: How good am I at:

- 114. Forming mental pictures
- 115. Sizing up a situation quickly
- 116. Using figures and symbols
- 117. Speaking before groups
- 118. Reading and writing
- 119. Solving problems by reasoning
- 120. Speed and accuracy in assembling
- 121. Drawing and painting

MY PERSONALITY: I believe that I am:

- 122. Well liked by those who know me
- 123. Regarded as a "sales" type
- 124. Able to accept criticism and benefit by it
- 125. Bothered by fears that I will not succeed
- 126. Able to tackle tough problems and succeed
- 127. One who treats others so their feelings are not hurt
- 128. One who does things well and promptly, even if I do not like to do them

APPENDIX B

September 1968

MEMO

TO: Administrators of SUTOE Assessment Forms

FROM: Hartley B. Campbell, Consultant, Vocational
Guidance
Division of Continuing Education - Room 126
General Services Building - Salem, Oregon 97310

SUBJECT: Suggestions for Administration of Forms

It is recommended that the six-page SUTOE Assessment Form be filled out by students during the first week or two of school. Hopefully, this will provide information about how individual students appraise themselves before they are very far into the experiences of the new school year. Near the end of the year, it is anticipated that the same students will again fill out the Form. We hope it will be possible to determine if there is a statistically significant difference in self understanding and planning (as indicated by individual responses) at the end of their year of school experiences.

Following many helpful suggestions, the six-page Form has been edited, and hopefully improved, though not shortened appreciably. A serious effort has been expended to write the items so that junior high school age students can understand the vocabulary and respond according to feelings and/or knowledge about the issues raised.

Knowing that some students may be non-readers to a greater or lesser degree, it would seem to me to be permissible to help them with the reading where necessary, but you are urged not to explain any item to the extent that a response would be provided during the filling out of the Form. We are not attempting to test their reading ability, nor their vocabulary, but to assess their self understanding and occupational awareness at this time, as indicated by individual item responses.

It is hoped that an environment permitting individual concentration and answers (in a classroom setting) will be maintained during administration of the Form, thus avoiding any biased responses as a result of undue conversation or commotion. Experience has shown that some junior high age students can read and respond to the six pages in about thirty minutes, but it would probably be advisable to allow at least a full class period for administration. If it is necessary to use two non-contiguous time periods, please be sure that students do not have access to the Forms in the intervening time. We would like to have supervised administration, and a response for every item.

This six-page Form is not to be construed in any way as an inhibiting factor in the use of other forms or techniques in your teaching, but you are requested not to use this Form again before communication.

Completed Forms are to be returned to the name and address listed on page one. Thank you for your cooperation.

APPENDIX C

TO: Administrators of SUTOE Assessment Forms Spring 1969

FROM: Hartley B. Campbell, Consultant, Vocational Guidance
Division of Continuing Education - Room 126
General Services Building, Salem, Oregon 97310

RE: Reminders for Administration of Forms

You will recall that early last fall the six-page SUTOE Assessment Form was filled out by students in your school. At that time, we asked you to administer the same form to the same students this spring. New copies have been prepared on a different color. We hope it will be possible to determine if there is a statistically significant difference in self understanding (as indicated by responses to individual items) at the end of their year of school experiences.

Again, we hope that junior high school age students can understand the vocabulary and respond according to feelings and/or knowledge about the issues raised. It would seem to be permissible to help non-readers with the reading where necessary, but you are urged not to explain any item to the extent that a response would be provided during the filling out of the form.

We would like to have supervised administration and a response for every item. If it is necessary to use two non-contiguous time periods, be sure students do not have access to the forms in the intervening time. Please alphabetize and return completed forms to the

above address, and do be assured we are warmly appreciative of your cooperation.

APPENDIX D

Identification of Groups in the StudyExperimental Groups: SUTOE Grade 8 Full Year

- A - Astoria Junior High, Astoria
- B - Beaver Elementary, Beaver
- C - Broadway Elementary, Seaside
- D - Cloverdale Grade, Cloverdale
- E - Ft. Stevens Junior High, Hammond
- F - Lewis and Clark Elementary, Astoria (Lewis & Clark Dist.)
- G - Michigan Avenue Junior High, Coos Bay
- H - North Douglas Upper Elementary, Drain

SUTOE Gr. 8 Semester or Part-time

- I - Clatskanie Elementary, Clatskanie
- J - Garibaldi Elementary, Garibaldi
- K - Hilda Lahti Elementary, Astoria (Columbia Co. Dist. #5J)
- L - Nehalem Upper Elementary, Nehalem
- M - Star of the Sea, Astoria (Parochial)
- N - Tillamook Junior High, Tillamook

SUTOE Gr. 9 Programs Full Year

- O - Mazama (Coffman), Klamath Falls
- P - Mazama (Jewel), Klamath Falls
- Q - Mazama (Stalpes), Klamath Falls

SUTOE Gr. 9 Programs Full Year (Cont.)

R - Ontario Junior High, Ontario

S - La Creole Junior High, Dallas

Other

T - Ten Percent Sample Gr. 8 (Clatsop-Columbia-Tillamook Co.)

Control Groups: Grade 9

U - Burns Union High, Burns

V - Parrish Junior High, Salem

Grade 8

W - Eddyville Elementary, Eddyville

X - East Hillsboro Junior High, Hillsboro

Y - Leslie Junior High, Salem

Z - Parrish Junior High, Salem